FUJITSU

Plasmavision™

P42VCA20UH

SERVICE MANUAL

FUJITSU GENERAL Proprietary

FUJITSU GENERAL LIMITED

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IMPORTANT INFORMATION

WARNING :	TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

Please use a screen saver to prevent burning of an after-image on the screen.

Electrical energy can perform many useful functions. This unit has been engineered and manufactured to assure your personal safety. But IMPROPER USE CAN RESULT IN POTENTIAL ELECTRICAL SHOCK OR FIRE HAZARD. In order not to defeat the safeguards incorporated into this unit, observe the following basic rules governing its installation, use and service. Please read these "Important Safeguards" carefully before use.

Read all the safety and operating instructions before operating the unit.

Retain the safety and operating instructions for future reference.

Adhere to all warnings on the unit and in the operating instructions.

Follow all operating instructions.

Unplug the unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

Do not use attachments not recommended by the manufacturer as they may be hazardous.

Do not use the unit near water. Do not use the unit immediately after moving it from a low temperature to a high temperature environment, as this causes condensation, which may result in fire, electric shock, or other hazards.

Do not place the unit on an unstable cart, stand, or table. The unit may fall, causing serious injury to a child or adult, and serious damage to the unit. Mount the unit according to the manufacturer's instructions, using the mount recommended by the manufacturer.

When the unit is used on a cart, avoid quick stops, excessive force, and uneven surfaces which may cause the unit and cart to overturn, damaging the unit or causing possible injury to the operator.
When transporting by car, place the unit as shown in the figure.



Slots and openings in the cabinet are provided for ventilation. These ensure reliable operation and protect the unit from overheating. These openings must not be blocked or covered. (The openings should never be blocked by placing the unit on a bed, sofa, rug, or similar surface. The unit should not be placed in a built - in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions are adhered to.) For proper ventilation, separate the unit from other equipment, which may obstruct ventilation. Keep the unit at least 10cm from other equipment.

Operate only with the type of power source indicated on the label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

This unit is equipped with a three-wire plug. This plug will fit only into a grounded power outlet. If you cannot insert the plug into the outlet, have an electrician install the proper outlet. Do not defeat the safety purpose of the grounded plug.

Route power cords so that they are not likely to be walked on or pinched by items placed on or against them. Pay particular attention to cords at doors, plugs, receptacles, and where they exit from the unit.

For added protection during a lightning storm, or when the unit is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cabling. This will prevent damage to the unit by lighting and power line surges.

Do not overload wall outlets, extension cords, or convenience receptacles on other equipment as this can result in fire or electric shock.

Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-circuit parts that could result in a fire or electric shock. Never spill liquid of any kind onto the unit.

Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltages and other hazards. Have all service done by qualified service personnel.

Unplug this unit from the wall outlet and have it serviced by qualified service personnel in the following cases:

a) If the power supply cord or plug is damaged.
b) If liquid has been spilled, or objects have fallen onto the unit.
c) If the unit has been exposed to rain or water.
d) If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the Operation Manual, as improper adjustment of controls may result in damage and will often require extensive work by a qualified technician to restore the unit to normal operation.
e) If the unit has been dropped or damaged in any way.
f) A distinct change in performance indicates that service is required.

When required, be sure the service technician uses replacement parts specified by the manufacturer or parts with the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Upon completion of any service of repairs, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

Place the unit more than one foot away from heat sources such as radiators, heat registers, stoves, and other devices (including amplifiers) that produce heat.

When connecting other devices such as VCR's and personal computers, turn off the power to this unit to protect against electric shock.

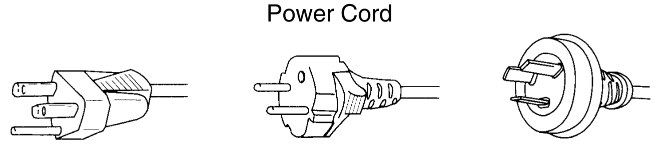
Do not place combustibles such as cloth, paper, matches, aerosol cans or gas lighters that prevent special hazards when overheated behind the cooling fan.

Use only the accessory cord designed for this unit to prevent shock.

The power supply voltage rating of this unit is AC100-240V, but the attached power cord conforms to the following power supply voltage. Use only the Power Cord designated by our dealer to ensure Safety and EMC.

When used with other power supply voltages, the power cable must be changed.
Consult your local dealer.

Power Cord



Power supply voltage :	AC 100 - 125 V	AC 200 - 240 V	AC-240V (SAA TYPE)

SPECIFICATIONS

Power requirement

	220-240V, 50/60Hz (W, E Type)
	120V, 50/60Hz (U Type)
Current drain	1.7A-1.4A (W, E 20 Type)
	4.2A (U 20 Type)
	1.8A-1.5A (W, E 21 Type)

Display panel

Screen size	92.0 (W) x 51.8 (H) [cm]
	40.7 (W) x 25.2 (H) [inch]
Aspect ratio	16 : 9
Number of pixels	852 (H) x 480 (V) pixels
Pixel pitch	1.08mm x 1.08mm
Contrast ratio	3000 : 1
Luminance	800 cd/m^2
Viewing angle	Max. 160 degrees

Input Terminals

Video input (option)	BNC terminal 1.0V_{P-P} /75Ω
S video input (option)	S terminal Y signal:1.0V_{P-P} /75Ω C signal:0.286V_{P-P} /75Ω
Analog RGB 1 input	mD-sub:15pin (3 row type) Video : 0.7V_{P-P} /75Ω SYNC signal : TTL level
Analog RGB 2 input	BNC terminal x 5 G: 0.7V_{P-P}/75Ω B: 0.7V_{P-P}/75Ω R: 0.7V_{P-P}/75Ω H: TTL level or 0.3V_{P-P} /75Ω V: TTL level or 0.3V_{P-P} /75Ω
User set mode	8 memories (each RGB1,2,3)
Display frequency	Horizontal :15.63 to 80.0MHz Vertical : 50.0 to 120Hz Dot clock:50MHz Max XGA 68MHz

RS-232C D-sub 9 pin terminal

Color system NTSC/PAL/SECAM/N-PAL/M-PAL /4.43NTSC/PAL60

Analog audio input Two RCA terminals (one system) 500mVrms/22kΩ

Effective max. output: Level terminal 12W+12W (L/R), 6 Ω

Display colors 16.7 million (256 each for R.G.B.)

Outer dimensions
Width : 103.5cm (40.7 inch)
Height: 64.0cm (25.2 inch)
Depth : 8.5 cm (3.3 inch)

Net weight 29.5Kg

Environment (Operating)

Temperature	0° to 40°C
Relative humidity	20 to 80%
Pressure	850 to 1,114 hPa

Accessories
User's manual
Power cord
Small ferrite core (2) (21 Only)
Big ferrite core (2)
Remote controller
Batteries (Type AA x 2)

Options

Stand	P-TT4200
Wall mounting unit	P-WB4200 0° to 15° mounting angle
Hanging unit	P-CT4200 0° to 15° mounting angle
Speaker	P-42SP11 (1 set of 2 speakers)
Speaker stand	P-42ST11 (1 set of 2 speakers stands)
Videoboard	P-TE1020E

Standards

P42VCA20WH
P42VCA20EH
P42VCA20UH
P42VCA21WH
P42VCA21EH

- UL,CSA
  - Safety: UL6500
    C-UL
  - EMC: FCC Part15 Class A
    ICES-003 Class A
- CE
  - Safety: EN60065
  - EMC :
    - EN55022 1998, Class A
    - EN61000-3-2 1995
    - EN61000-3-3 1995
    - EN55024 1998
    - EN61000-4-2 1995
    - EN61000-4-3 1996
    - EN61000-4-4 1995
    - EN61000-4-5 1995
    - EN61000-4-6 1996
    - EN61000-4-8 1993
    - EN61000-4-11 1994
- AS
  - Safety : IEC60065
  - EMC : AS/NZS 3548

SETTING SIGNALS

This display can store parameter settings for eight additional signals for RGB.
To do this, select the desired signal and follow "RGB MODE ADJUSTMENT" in the manual to adjust the parameters.
When you finish, the settings will be automatically stored.

FACTORY SET SIGNALS (RGB MODE)

Main corresponding signals (RGB mode)

Display (dots x lines)	Horizontal frequency (kHz)	Vertical frequency (Hz)	Signal	DVI-D
640 x 480	31.47	59.94	VGA	◯
640 x 480	37.50	75.00	VGA 75 Hz	
640 x 480	43.27	85.01	VGA 85 Hz	
720 x 400	31.47	70.09	400 lines	◯
800 x 600	37.88	60.32	SVGA 60 Hz	◯
800 x 600	46.88	75.00	SVGA 75 Hz	
800 x 600	53.67	85.06	SVGA 85 Hz	
1024 x 768	48.36	60.00	XGA 60 Hz	◯
1024 x 768	60.02	75.03	XGA 75 Hz	
1024 x 768	68.68	84.99	XGA 85 Hz	
1280 x 1024	63.98	60.02	SXGA 60 Hz	
1280 x 1024	79.98	75.03	SXGA 75 Hz	
1600 x 1200	75.00	60.00	UXGA 60 Hz	
1600 x 1200	106.25	85.00	UXGA 85 Hz	
848 x 480	31.02	60.00		◯
852 x 480	31.72	59.97		
1360 x 768	47.71	60.01		
720 x 485	15.73	59.94	60 fields	
720 x 575	15.63	50.00	50 fields	

* With some input signals, “Out of range” may appear even when the horizontal and vertical frequencies are within their permissible ranges. Make sure that the vertical frequency of the input signal is 85 Hz or less for SVGA/XGA/UXGA, 75 Hz or less for SXGA.

FACTORY SET SIGNALS (Component video mode)

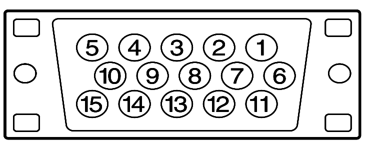
Horizontal frequency (kHz)	Vertical frequency (Hz)	Signal
15.73	59.94	SDTV 480i
15.63	50.00	SDTV 576i
31.47	59.94	SDTV 480p
31.25	50.00	SDTV 576p
45.00	60.00	HDTV 720p
37.50	50.00	HDTV 720p
33.75	60.00	HDTV 1,080i
28.13	50.00	HDTV 1,080i

FACTORY SET SIGNALS (Video, S-video mode)

Horizontal frequency (kHz)	Vertical frequency (Hz)	Signal
15.73	59.94	NTSC
15.63	50.00	PAL
15.63	50.00	SECAM
15.63	59.52	PAL 60
15.63	50.00	N-PAL
15.73	59.95	M-PAL
15.73	59.94	4.43 NTSC

- In the 800 x 600 and 1,024 x 768 modes, images of reduced size are displayed on the screen, using size reduction and interpolation. Also note that on-screen information is also displayed in reduced size.
- " Out of range" appears if the display receives a signal whose characteristic does not fall within the display's permissible range.
- You can check the input signals with "Information" on the OTHERS Menu screen.

RGB INPUT TERMINAL

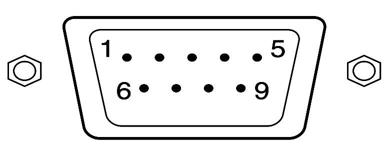


* The sync switch (TTL/ANALOG switch) is on the rear of the 13-pin horizontal sync and 14-pin vertical sync terminals.

Pin No.	Input signal	Pin No.	Input signal
1	Red	9	
2	Green	10	Ground
3	Blue	11	
4		12	
5	Ground	13	Horiz. sync
6	Ground	14	Vert. sync
7	Ground	15	
8	Ground	Outer side	Ground

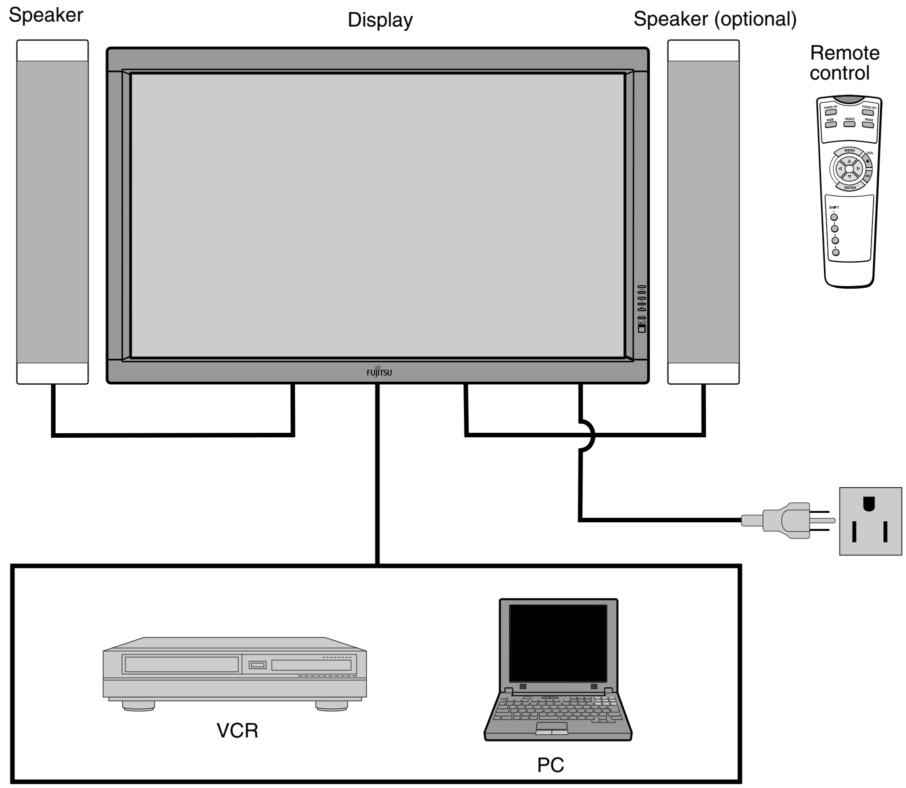
RS-232C INPUT TERMINAL

Pin No.



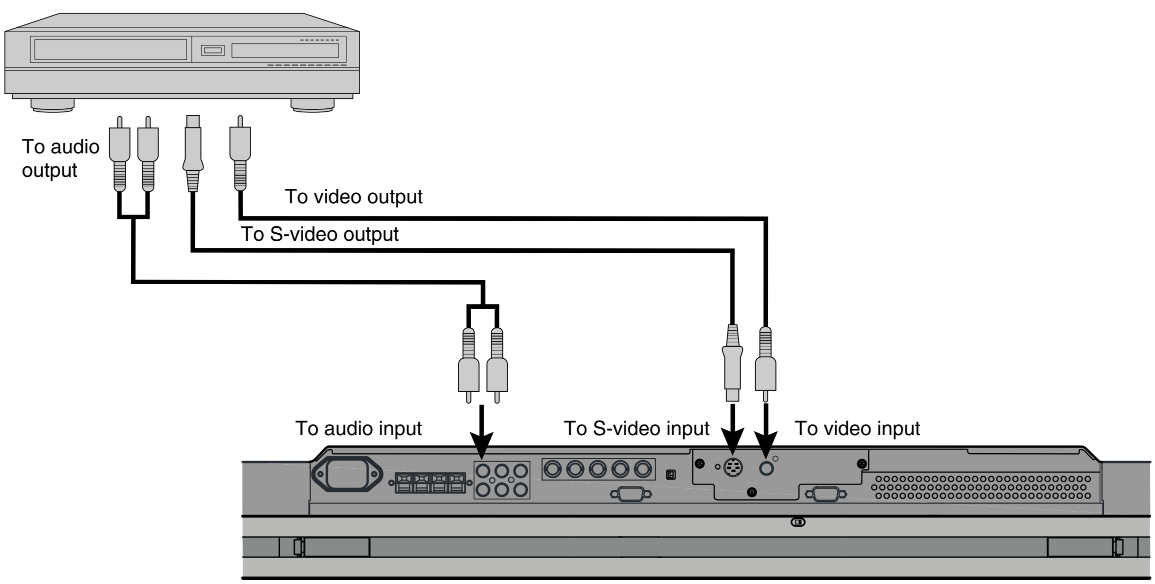
Pin No.	No. signal
1	DCD (Data Carrier Detect)
2	RD (Receive Data)
3	TD (Transmit Data)
4	DTR (Data Terminal Ready)
5	GND (Ground)
6	DSR (Data Set Ready)
7	RTS (Request To Send)
8	CTS (Clear To Send)
9	RI (Ring Indication)

EXAMPLE OF CONNECTION TO EXTERNAL COMPONENTS



VCR

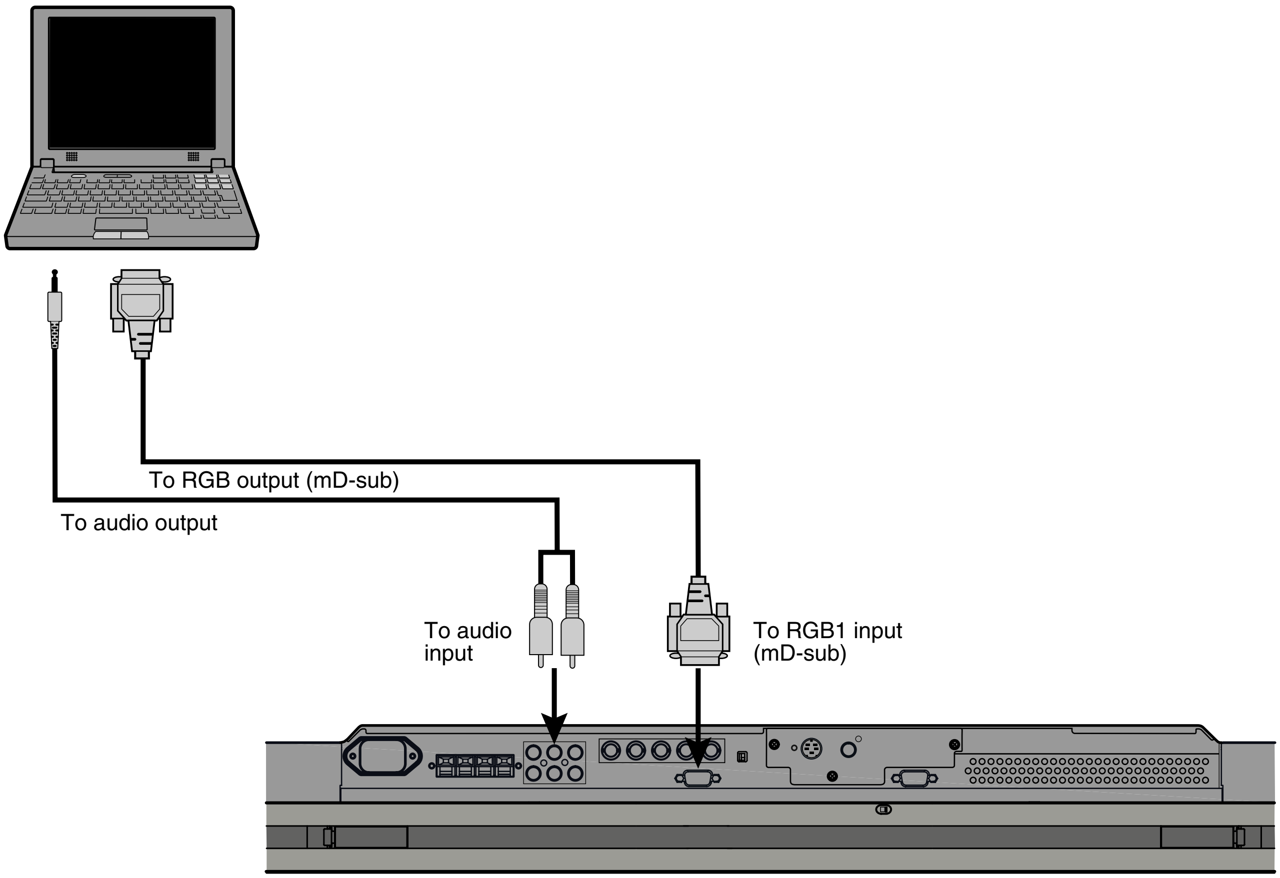
- Connect the video signal cable to either the S-video input terminal or the video input terminal.



Bottom of Display (Ex.: P42VCA11 series)

PC

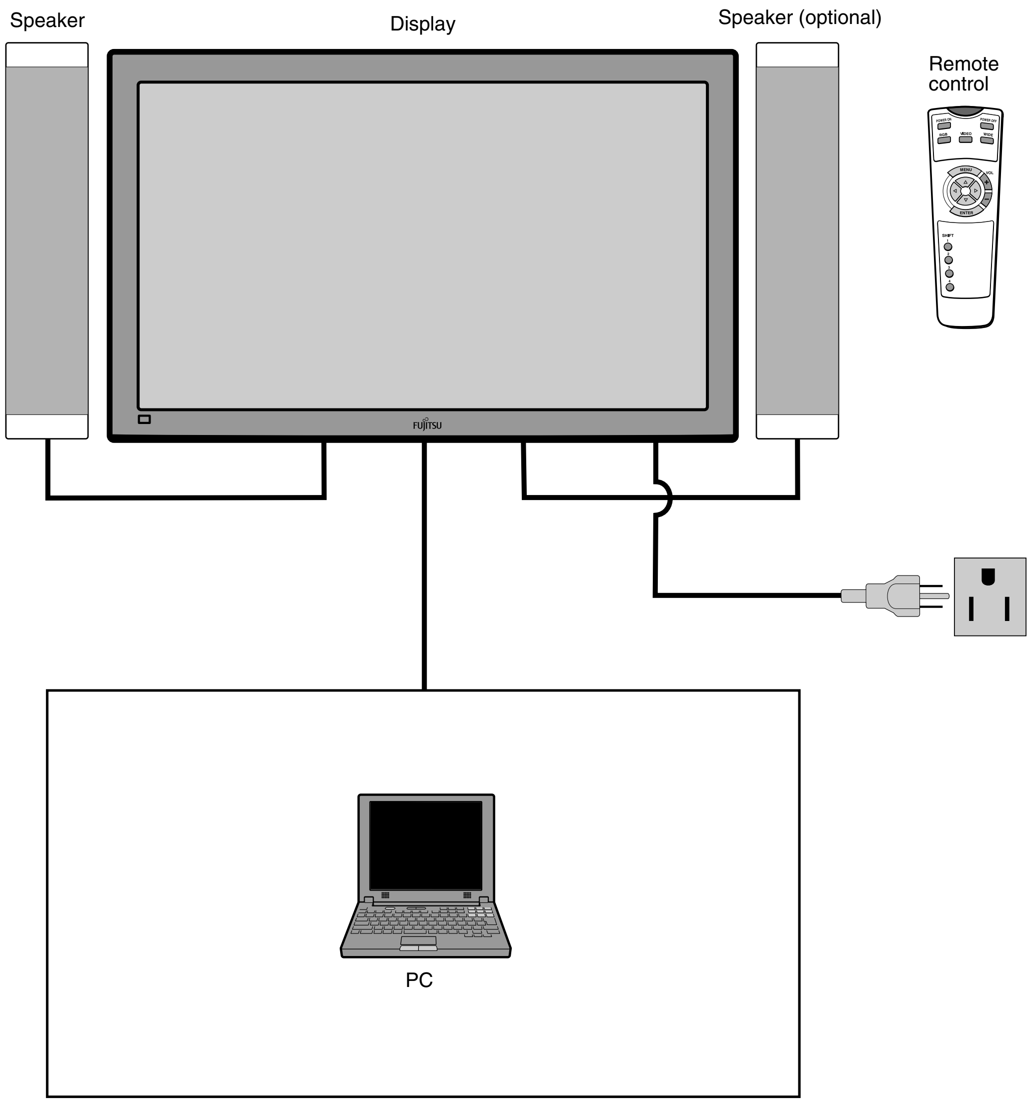
- As the cable for connecting a PC differs with the PC model, please consult your dealer for information on the right cable to purchase.



Bottom of Display (Ex.: P42VCA11 series)

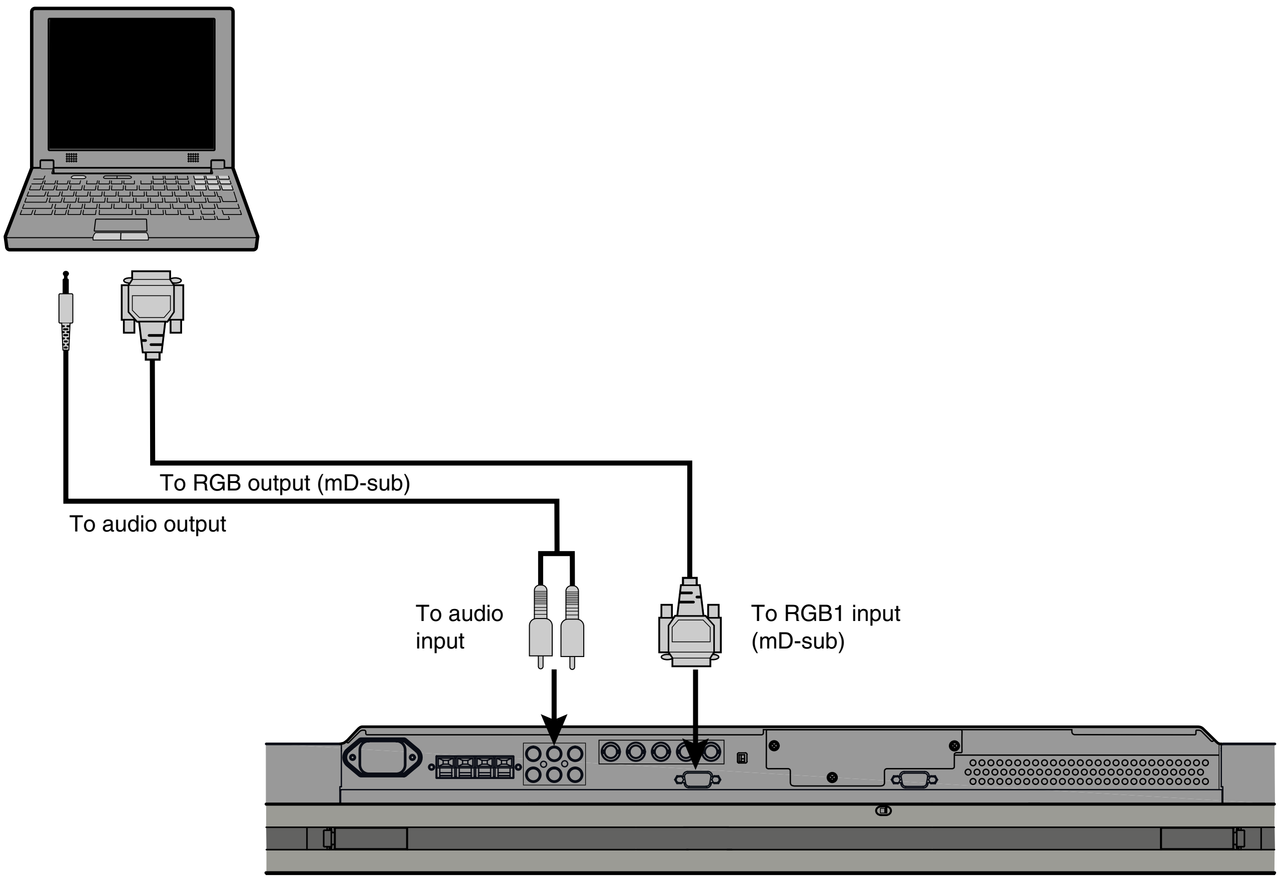
* Video board nothing

EXAMPLE OF CONNECTION TO EXTERNAL COMPONENTS



PC

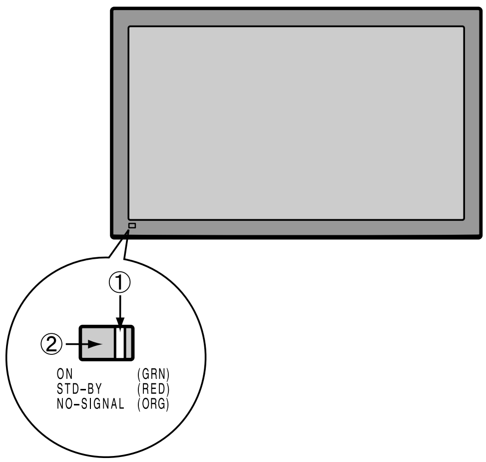
- As the cable for connecting a PC differs with the PC model, please consult your dealer for information on the right cable to purchase.



Bottom of Display (Ex.: P42VCA11 series)

PART NAMES AND FUNCTIONS

Front (both 42" and 50")



① **Power indicator lamp**

This lamp shows the state of the power supply.

Lit (red): Stand-by

Lit (green): Power ON

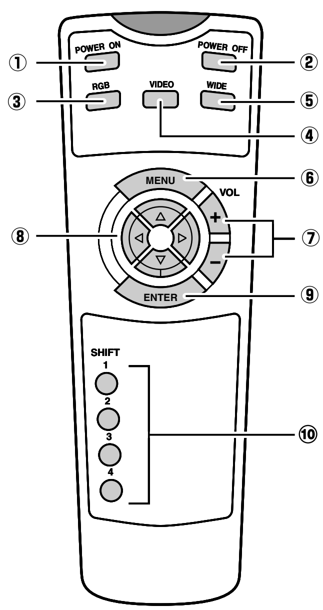
Lit (orange): Power saving (DPMS: Power saving function) mode ON

Flashing (red): Malfunction (Flashes differently depending on the type of malfunction.)

② **Remote control signal receiver**

Receives signals from the remote control.

REMOTE CONTROL



① **Power ON button [POWER ON]**
Turns the power ON.

② **Power OFF button [POWER OFF]**
Turns the power OFF.

③ **RGB input mode selector button [RGB]**
Switches between RGB input modes.

④ **Video input mode selector button [VIDEO]**
Switches between video input modes.

⑤ **Wide screen selector button [WIDE]**
Switches the screen over to a desired wide screen.

⑥ **Menu button [MENU]**
Use this button to display a desired menu for adjusting the picture.

⑦ **Volume adjustment buttons [VOL +/-]**
Adjust the volume. Press the + button to increase the volume.
Press the - button to reduce the volume.
* Not used with P50XCA10.

⑧ **Adjustment buttons [◀/▶/▼/▲]**
Use these buttons to scroll through options in a menu and change values.

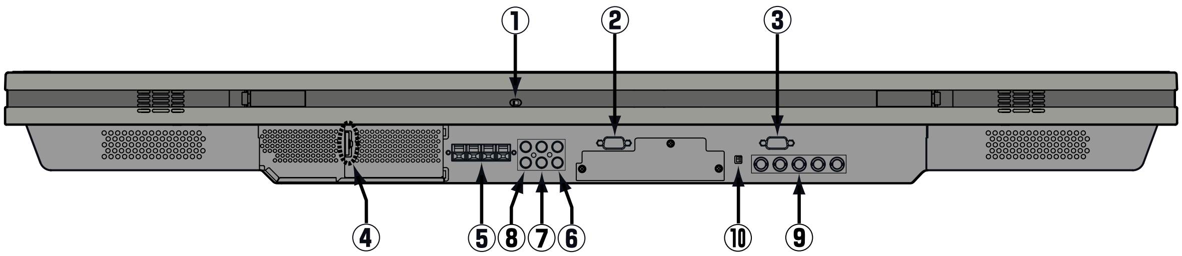
⑨ **Enter button [ENTER]**
Press this button to finalize the selection of a desired menu or option within a menu.

⑩ **Display selector buttons [SHIFT 1-4]**
When you use two or more displays, you can use these buttons to control up to four displays by assigning an unique number to each display.

* Video board nothing

DISPLAY SECTION – LOWER PART

Bottom (42" VCA 20/21 type)



① **OFF/STD-BY ⏻ switch**

OFF :The power indicator lamp goes off, and the power can' t be turned on by the power button. The power is partly supplied.

STD-BY ⏻:The power indicator lamp lights red, and the power can be turned on or off by the power button.

② **RS-232C terminal (RS-232C)**
This terminal is provided for you to control the display from the PC. Connect it to the RS-232C terminal on the PC.
When connecting a cable, attach a ferrite core to the cable.

③ **RGB1 input terminal (RGB1 INPUT/mD-sub)**
Connect this terminal to the PC's display (analog RGB) output terminal or decoder (digital broadcast tuner, etc.) output terminal.

④ **Power input terminal**
Connect this terminal to the power cable supplied with the display.
When connecting a cable, attach a ferrite core to the cable.

⑤ **External speaker output terminal (EXT SP)**
Connect this terminal to the optionally available speaker.
(When using other speaker than the optional one, use 4-16Ω speaker.)
When connecting a cable, attach a ferrite core to the cable.
*See the speaker instruction manual for more information.
* P42VCA21 only.

⑥ **Sound 1 input terminal (AUDIO1 INPUT)**

⑦ **Sound 2 input terminal (AUDIO2 INPUT)**

⑧ **Sound 3 input terminal (AUDIO3 INPUT)**
Connect this terminal to the sound output terminal of your computer, etc.
* This terminal is not available for P42VCA20.

⑨ **RGB2 input terminal (RGB2 INPUT/BNC)**
Connect this terminal to the PC’s display (analog RGB) output terminal or decoder (digital broadcast tuner,etc.) output terminal.

⑩ **RGB2 synchronization switch (SYNC SW TTL/ANALOG (75 Ω))**

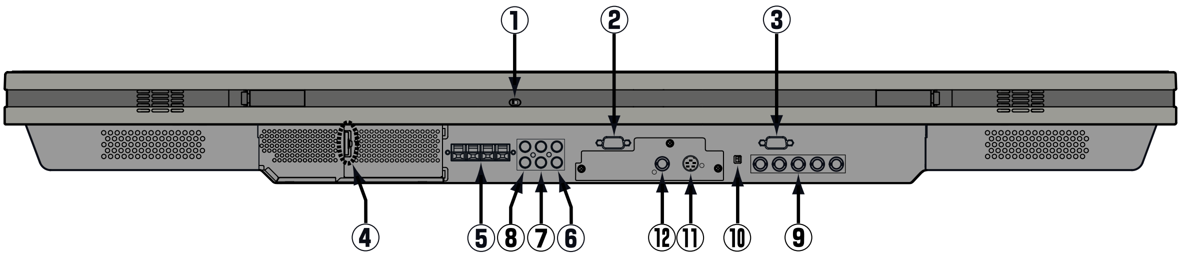
This switch is used to terminate horizontal (H) terminal and vertical (V) terminal, out of RGB2 input terminals, with 75 Ω.

TTL : Does not terminate.

ANALOG (75 Ω): Terminates.

DISPLAY SECTION – LOWER PART

Bottom (42" VCA 20/21/ type)



① **OFF/STD-BY ⏻ switch**

OFF :The power indicator lamp goes off, and the power can't be turned on by the power button. The power is partly supplied.

STD-BY ⏻:The power indicator lamp lights red, and the power can be turned on or off by the power button.

② **RS-232C terminal (RS-232C)**
This terminal is provided for you to control the display from the PC. Connect it to the RS-232C terminal on the PC.
When connecting a cable, attach a ferrite core to the cable.

③ **RGB1 input terminal (RGB1 INPUT/mD-sub)**
Connect this terminal to the PC's display (analog RGB) output terminal or decoder (digital broadcast tuner, etc.) output terminal.

④ **Power input terminal**
Connect this terminal to the power cable supplied with the display.
When connecting a cable, attach a ferrite core to the cable.

⑤ **External speaker output terminal (EXT SP)**
Connect this terminal to the optionally available speaker.
(When using other speaker than the optional one, use 4-16Ω speaker.)
When connecting a cable, attach a ferrite core to the cable.
*See the speaker instruction manual for more information.
* P42VCA21 only.

⑥ **Sound 1 input terminal (AUDIO1 INPUT)**

⑦ **Sound 2 input terminal (AUDIO2 INPUT)**

⑧ **Sound 3 input terminal (AUDIO3 INPUT)**
Connect this terminal to the sound output terminal of your VCR, etc.
* This terminal is not available for P42VCA20.

⑨ **RGB2 input terminal (RGB2 INPUT/BNC)**
Connect this terminal to the PC's display (analog RGB) output terminal.

⑩ **RGB2 synchronization switch (SYNC SW TTL/ANALOG (75 Ω))**

This switch is used to terminate horizontal (H) terminal and vertical (V) terminal, out of RGB2 input terminals, with 75 Ω.

TTL : Does not terminate.

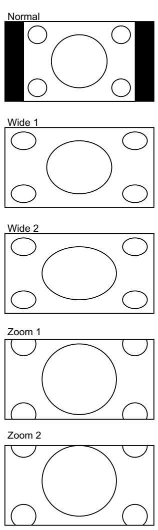
ANALOG (75 Ω): Terminates.

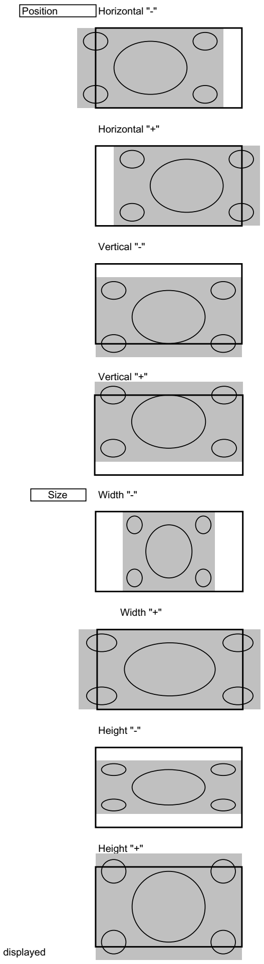
⑪ **S-Video input terminal (S-VIDEO INPUT)**
Connect this terminal to the S-video output terminal of your VCR.

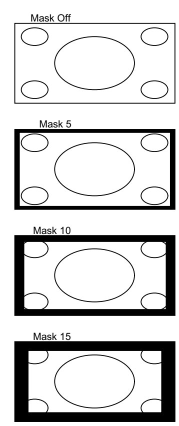
⑫ **Video input terminal (VIDEO INPUT)**
Connect this terminal to the video output terminal of your VCR.

VIDEO MODE ADJUSTMENT

- REMOTE CONTROLLER
  - POWER ON
  - POWER OFF
  - RGB
    - RGB 1
    - RGB 2
  - VIDEO
    - Video
    - S-video
  - WIDE
    - Normal
    - Wide 1
    - Wide 2
    - Zoom 1
    - Zoom 2
  - VOL. +
  - VOL. -
  - MENU / ENTER
    - PICTURE
      - Contrast {-30 to +30}
      - Brightness {-60 to +60}
      - Color {-60 to +60}
      - Tint {-30 to +30}
      - Sharpness {-16 to +16}
      - Picture Mode
        - Dynamic
        - Real
        - Static
      - Luminance* {40 to 100%} *Can be set when Static is selected as the Picture Mode.
      - Color Temp. {-3500 to +3500}
      - User Color Temp.* *Can be set when User is selected as the Color Temp.
        - Red {0 to 255}
        - Green {0 to 255}
        - Blue {0 to 255}
    - POSITION/SIZE
      - Position
        - Horizontal {-30 to +30}
        - Vertical {-7 to +7 (Zoom -15 to +15)}
      - Size
        - Width {-7 to +16}
        - Height {-7 to +16}
    - AUDIO* *Cannot be set with P42VCA20
      - Treble {-6 to +6}
      - Bass {-6 to +6}
      - Balance {-10 to +10}
      - Loudness
        - On
        - Off
    - FEATURES
      - On Screen Menu
        - OSD
          - On
          - Off
        - Language
          - English
          - Deutsch
          - Español
          - Français
          - Italiano
          - Português
          - Русский* *Russian can only be set with the E-model.
      - Input Terminal
        - Video Input / S-video Input
          - Auto
          - NTSC
          - PAL
          - SECAM
          - PAL60
          - 4.43NTSC
        - BNC Input
          - RGB-Video
            - Mask
              - Off
              - 5
              - 10
              - 15
          - RGB-PC
          - Decoder
            - Mask
              - Off
              - 5
              - 10
              - 15
        - D-SUB Input
          - RGB-PC
          - Decoder
            - Mask
              - Off
              - 5
              - 10
              - 15
      - Others
        - DPMS
          - Time
            - Off
            - 1 min.
            - 15 min.
            - 45 min.
            - 60 min.
          - Background
            - Black
            - White
        - Audio Input* *Audio Input menu will not be displayed when "No Audio"is selected. *Cannot be set with P42VCA20.
          - RGB 1 / RGB 2 / Video / S-video
            - No Audio
            - Audio 1
            - Audio 2
            - Audio 3
        - Input Priority
          - Off
          - RGB 1
          - RGB 2
          - Video
          - S-video
        - Monitor No.
          - 0
          - 1
          - 2
          - 3
          - 4
        - White Screen
          - On
          - Off
        - Exhibition Mode
          - On
          - Off
        - Installation
          - -90 Deg.
          - Normal
          - +90 Deg.
        - Information
          - Mode
          - Monitor No.
          - Freq. Scan Mode
          - Input Signal
          - Freq.
    - FACTORY DEFAULT
      - Execute
        - Yes
        - No

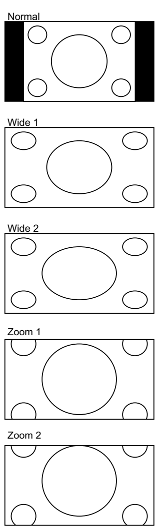


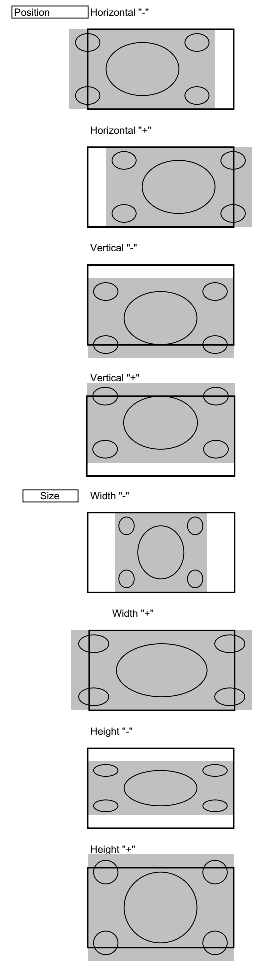


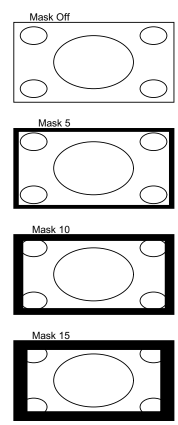


RGB MODE ADJUSTMENT

- REMOTE CONTROLLER
  - POWER ON
  - POWER OFF
  - RGB
    - RGB 1
    - RGB 2
  - VIDEO
    - Video
    - S-video
  - WIDE
    - Normal
    - Wide 1
    - Wide 2
    - Zoom 1
    - Zoom 2
  - VOL. +
  - VOL. -
  - MENU / ENTER
    - PICTURE
      - Contrast {-30 to +30}
      - Brightness {-60 to +60}
      - Color {-60 to +60}
      - Tint {-60 to +60}
      - Sharpness {-4 to +4}
      - Picture Mode
        - Dynamic
        - Real
        - Static
      - Luminance* {40 to 100%} *Can be set when Static is selected as the Picture Mode.
      - Color Temp. {-3500 to +3500}
      - User Color Temp.*
        - Red {0 to 255}
        - Green {0 to 255}
        - Blue {0 to 255}
        - *Can be set when User is selected as the Color Temp.
    - POSITION/SIZE
      - Position
        - Horizontal {-150 to +150}
        - Vertical {-150 to +150}
      - Size
        - Width {-25 to +50}
        - Height {-25 to +50}
    - AUDIO* (*Cannot be set with P42VCA20)
      - Treble {-6 to +6}
      - Bass {-6 to +6}
      - Balance {-10 to +10}
      - Loudness
        - On
        - Off
    - FEATURES
      - Adjustment
        - Dot Clock {-60 to +60}
        - Clock Phase
          - Auto
          - Manual {1 to 32}
        - Clamp Position {-8 to +8}
        - Auto Calibration
          - Execute
            - Yes
            - No
      - On Screen Menu
        - OSD
          - On
          - Off
        - Language
          - English
          - Deutsch
          - Español
          - Français
          - Italiano
          - Português
          - Русский *Russian can only be set with the E-model.
      - Input Terminal
        - Video Input / S-video Input
          - Auto
          - NTSC
          - PAL
          - SECAM
          - PAL60
          - 4.43NTSC
        - BNC Input
          - RGB-Video
            - Mask
              - Off
              - 5
              - 10
              - 15
          - RGB-PC
          - Decoder
            - Mask
              - Off
              - 5
              - 10
              - 15
        - D-SUB Input
          - RGB-PC
          - Decoder
            - Mask
              - Off
              - 5
              - 10
              - 15
      - Others
        - DPMS
          - Time
            - Off
            - 1 min.
            - 15 min.
            - 45 min.
            - 60 min.
          - Background
            - Black
            - White
        - Audio Input*
          - RGB 1
          - RGB 2
          - Video
          - S-video
            - No Audio
            - Audio 1
            - Audio 2
            - Audio 3
          - *Audio Input menu will not be displayed when "No Audio"is selected. *Cannot be set with P42VCA20.
        - Screen Orbiter
          - Mode / Time
            - Off
            - Time
            - Mode
          - Moving Area
            - Min.
            - Std.
            - Max.
        - Input Priority
          - Off
          - RGB 1
          - RGB 2
          - Video
          - S-video
        - Monitor No.
          - 0
          - 1
          - 2
          - 3
          - 4
        - Direct Setting
          - Auto
          - VGA
          - WVGA
          - 480P
          - XGA
          - WXGA
          - SXGA
          - SXGA+
        - Code Setting
          - Auto
          - Manual {00 to 34} *Hexadecimal
        - White Screen
          - On
          - Off
        - Exhibition Mode
          - On
          - Off
        - Installation
          - -90 Deg.
          - Normal
          - +90 Deg.
        - Information
          - Mode
          - Monitor No.
          - Freq. Scan Mode
          - Input Sync
          - Freq.
          - Preset No.
    - FACTORY DEFAULT
      - Execute
        - Yes
        - No







TROUBLESHOOTING USING LED AND OSD

1. Display

(1) OSD

Three kinds of error messages are displayed on the screen, and the power is turned off 10 sec later.

(2) LED

LED error is displayed continuously after the power is turned off.

2. Error types and check points

(1) OSD

On screen display	Cause	Check point
ERROR MESSAGE CONDITION 1	Fan protector operated	● Fan ● Main power PCB ● Main/Digital PCB
ERROR MESSAGE CONDITION 2	Temperature protector operated	● Ambient temperature of unit ● Main/Digital PCB ● Temp. sensor IC757

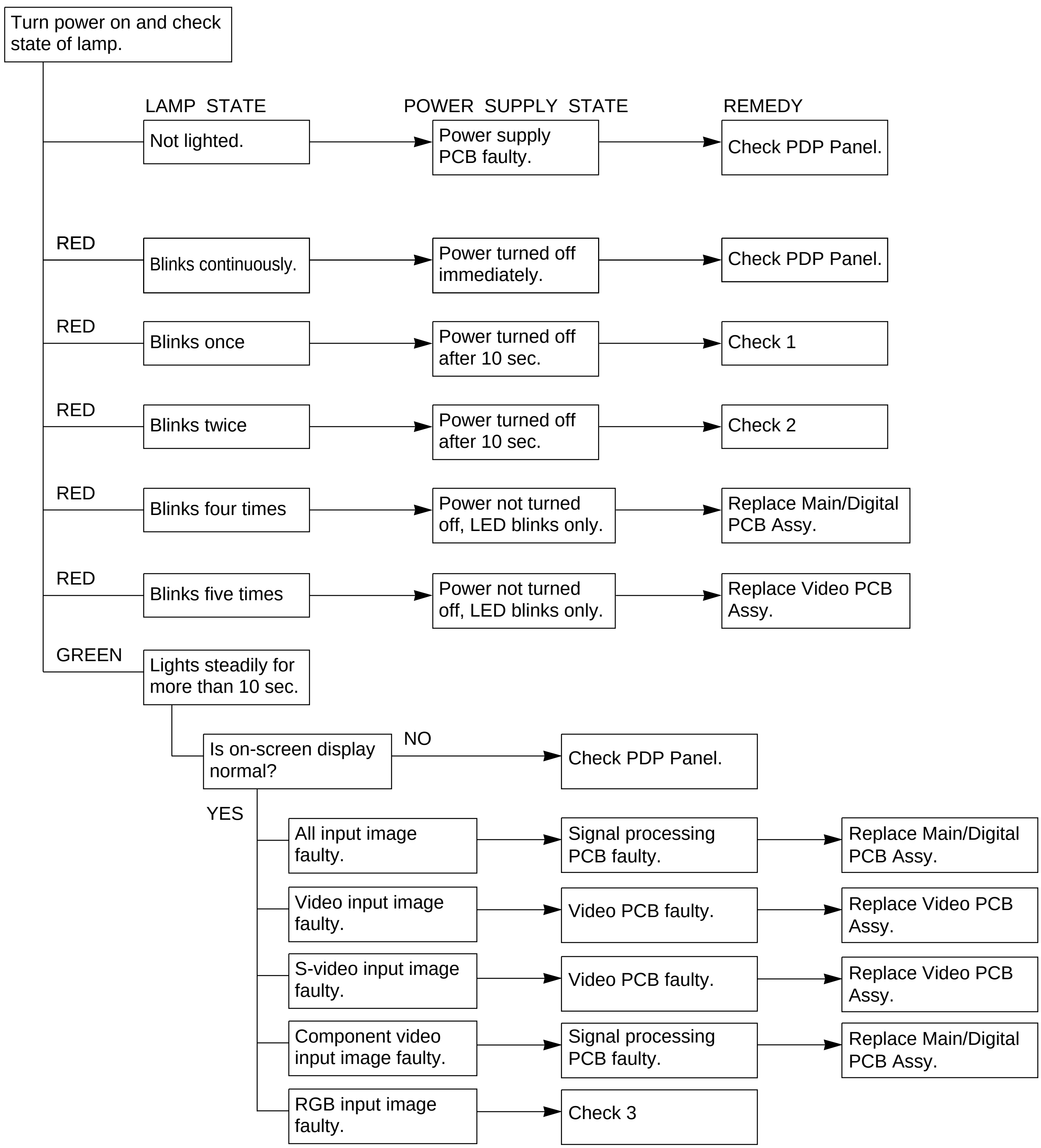
(2) LED

LED lamp display status	Cause	Check point
Steady light (Red)	Stand-by status	————
Continuous Flashes continuously (Red)	No power Power supply protector operated	● Main power PCB ● PDP panel
1 time Flashes once every 4 sec. (Red)	Fan protector operated	● Fan ● Main power PCB ● Main/Digital PCB
2 times Flashes twice every 5 sec. (Red)	Temperature protector operated	● Ambient temperature of unit ● Temperature sensor IC757 ● Main/Digital PCB
3 times Flashes three times every 6 sec. (Red)	EEPROM error	● Main/Digital PCB ● Video PCB
5 times Flashes five times every 8 sec. (Red)	Main/Digital circuit faulty	● Video PCB

TROUBLESHOOTING FLOWCHART

LED lamp blinking

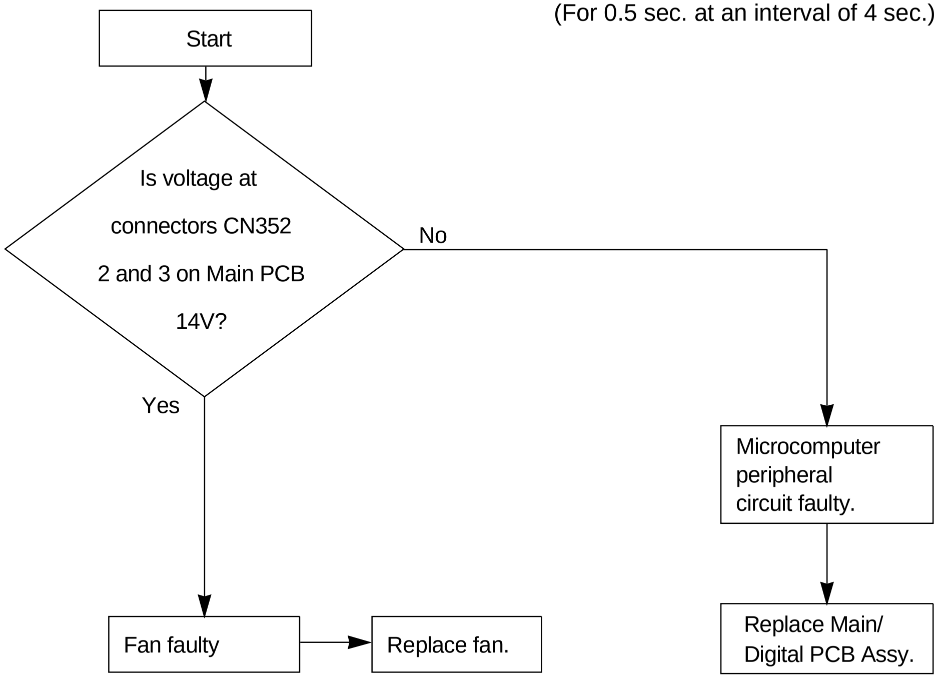
Note : 1. Since a voltage is applied to the Main Power PCB heat sinks while the set is operating, do not touch the heat sinks.
2. If the Main Power PCB insulation sheet is not installed when assembling, the Main Power PCB fuse will blow.



Check 1

Fan protector operated

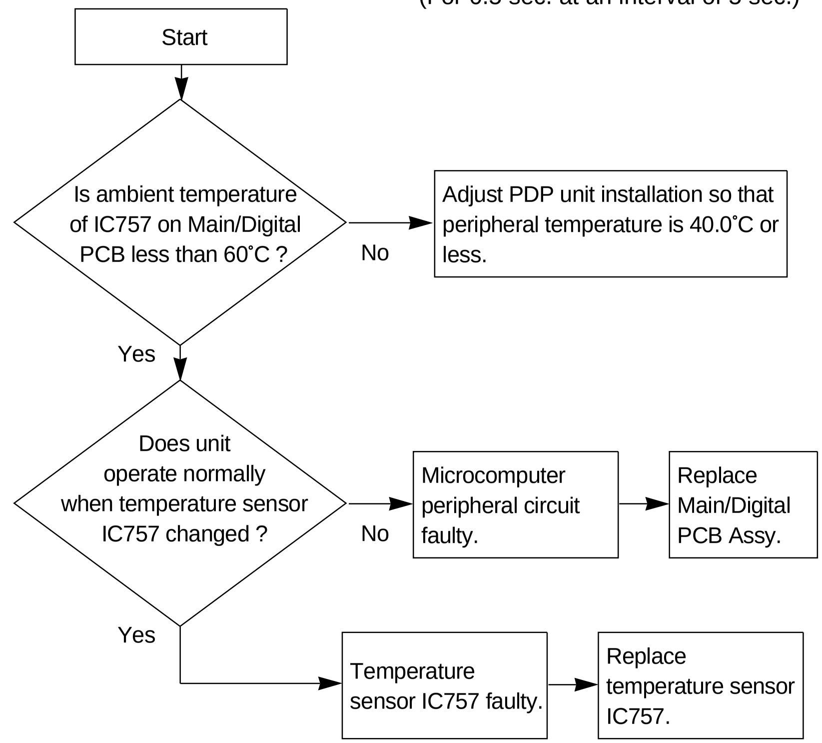
Power lamp: Flashes once intermittently in red.
(For 0.5 sec. at an interval of 4 sec.)



Check 2

Temperature protector operated

Power lamp : Flashes intermittently twice in red.
(For 0.5 sec. at an interval of 5 sec.)



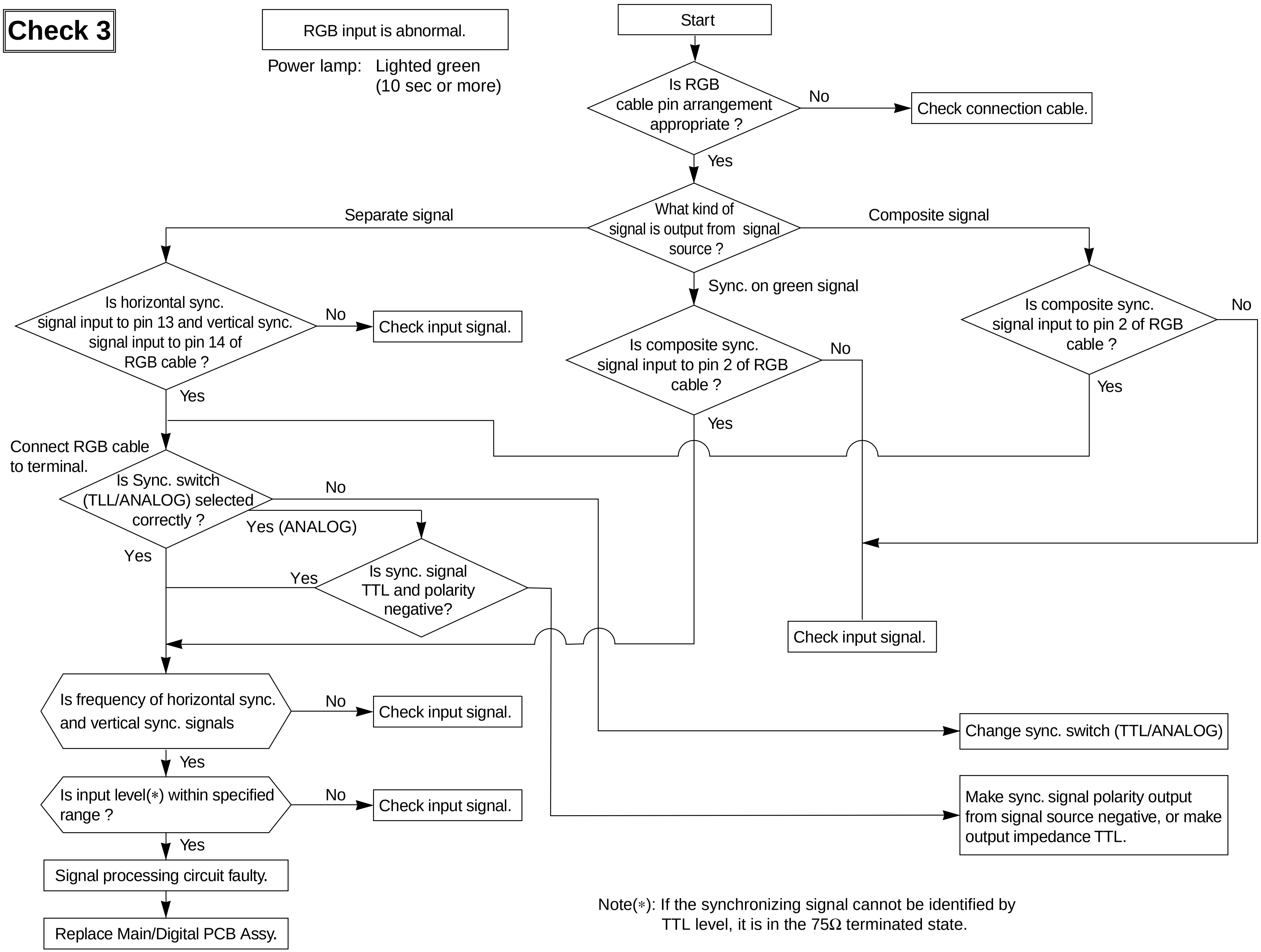
Temperature sensor cooling

The temperature sensor IC757 is installed on Main/Digital PCB. Turn the power off and cool with a point cooler.

Check 3

RGB input is abnormal.

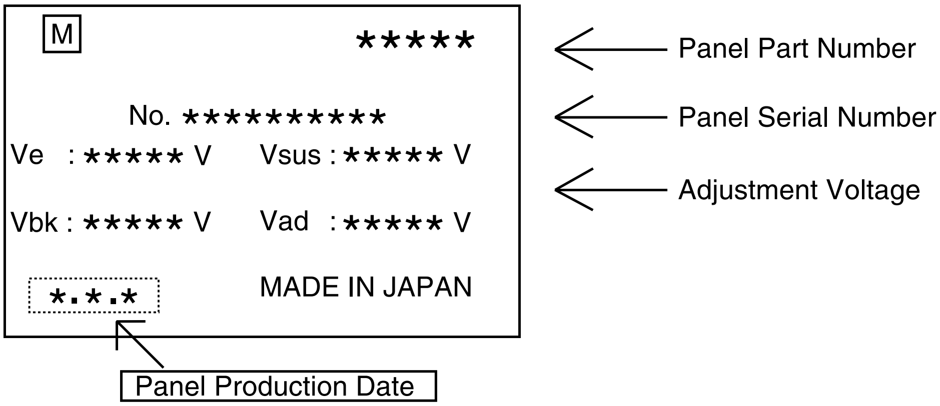
Power lamp: Lighted green (10 sec or more)



Note(*): If the synchronizing signal cannot be identified by TTL level, it is in the 75Ω terminated state.

EXPLANATION OF LABELS

● Panel Label Information



Panel Production Date

For Example---------1.8.2

1	8	2
Year	Month	
9 : 1999	1 : JAN	1 : Beginning of Month(01-10th)
0 : 2000	2 : FEB	2 : Middle of Month (11-20th)
1 : 2001	3 : MAR	3 : End of Month (21-31st)
2 : 2002		
	9 : SEP	
	0 : OCT	
	N : NOV	
	D : DEC	

● Unit Serial Number

For Example----------- YA1450001

YA 1 4 5 0001 * MID/AUG/2001
① ② ③ ④ ⑤ * YA Production Line

① Production Line No.

②Production Year
1 : 2001
2 : 2002

③Production Month
1 : JAN-FEB
2 : MAR-APR
3 : MAY-JUN
4 : JLY-AUG
5 : SEP-OCT
6 : NOV-DEC

④Production Period (Day)
1st Month
1 : BEG (1-10)
2 : MID (11-20)
3 : END (21-30/31)
2nd Month
4 : BEG (1-10)
5 : MID (11-20)
6 : END (21-30/31)

⑤Serial Number
From 0001-----

REPLACEMENT PARTS AND REQUIRED ADJUSTMENT

Caution

To remove PCB, wait for 1 minute after power was turned off for electrolytic capacitors to discharge.

Preparation

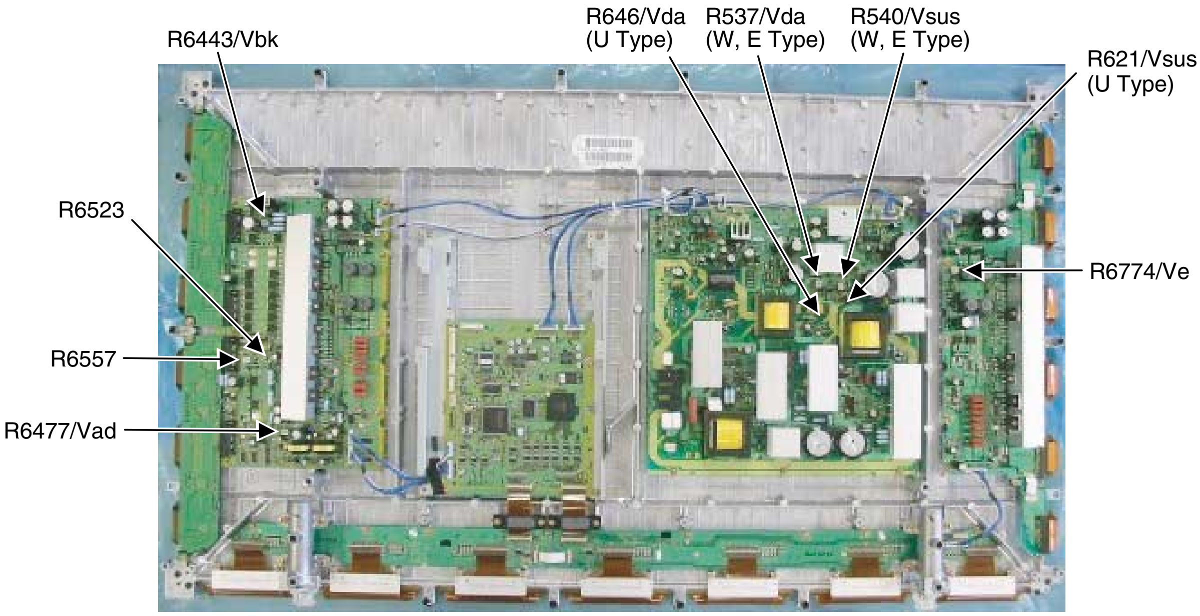
Wide------------------ Auto
Input------------------ White pattern

Quick adjustment after PCB replacement

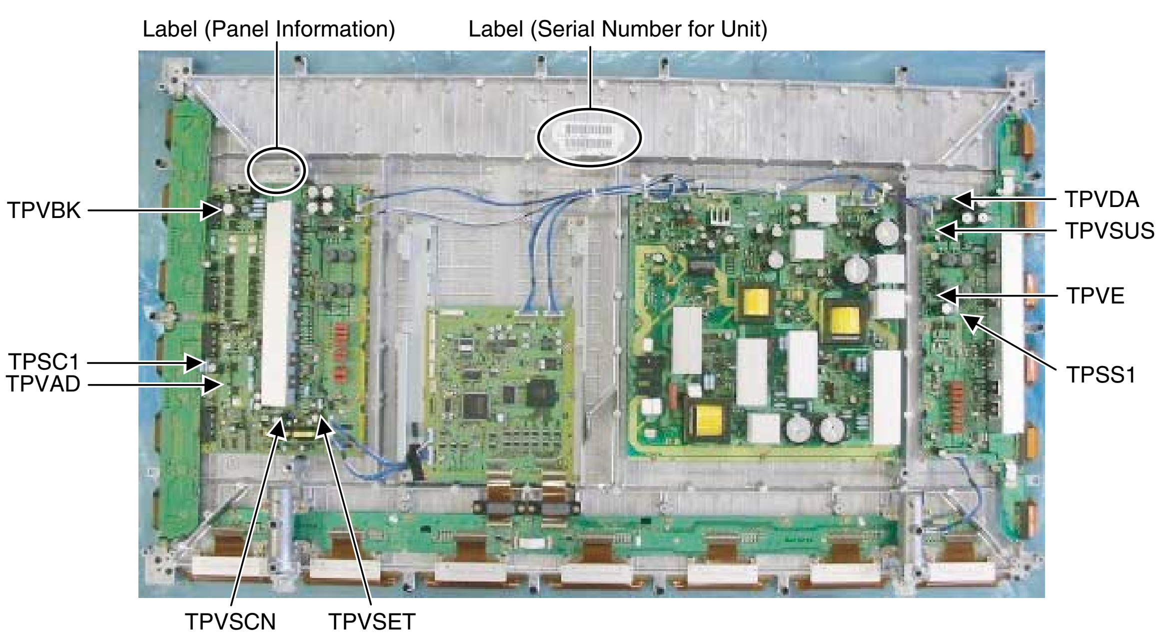
PCB	Item	Test Point	Level	VR	Remarks
Power Supply PCB	Vsus	TPVSUS	170V ± 1V	R540	W, E Type
				R621	U Type
	Vda	TPVDA	67V ± 1V	R537	W, E Type
				R646	U Type
Scan Drive PCB	Vbk	TPVBK	155V ± 5V	R6443	
	Vad	TPVAD	-90V ± 1V	R6477	
Sustain Drive PCB	Ve	TPVE	150V ± 1V	R6774	

VR AND TEST POINT LOCATION

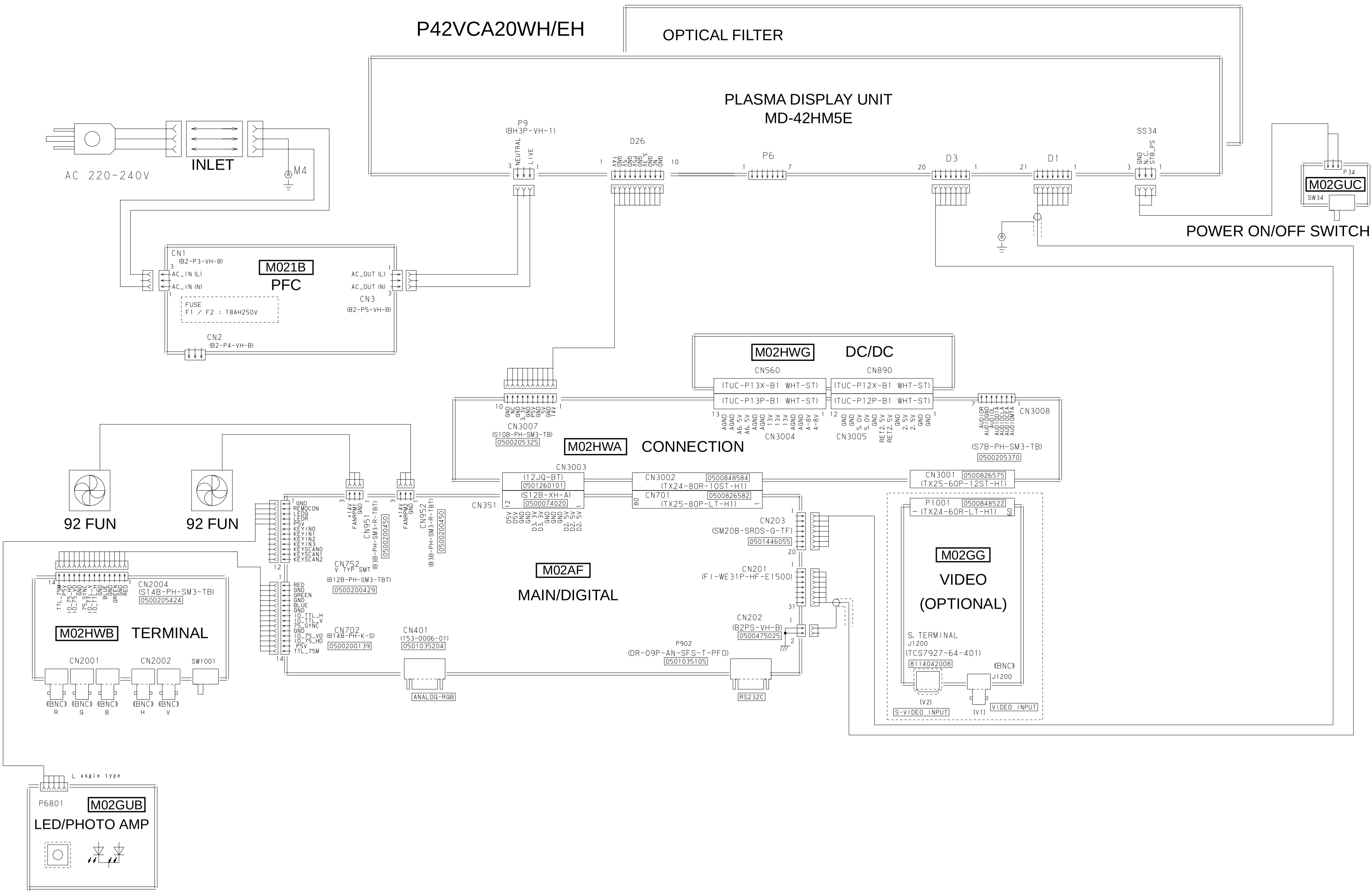
Adjustment VR Location

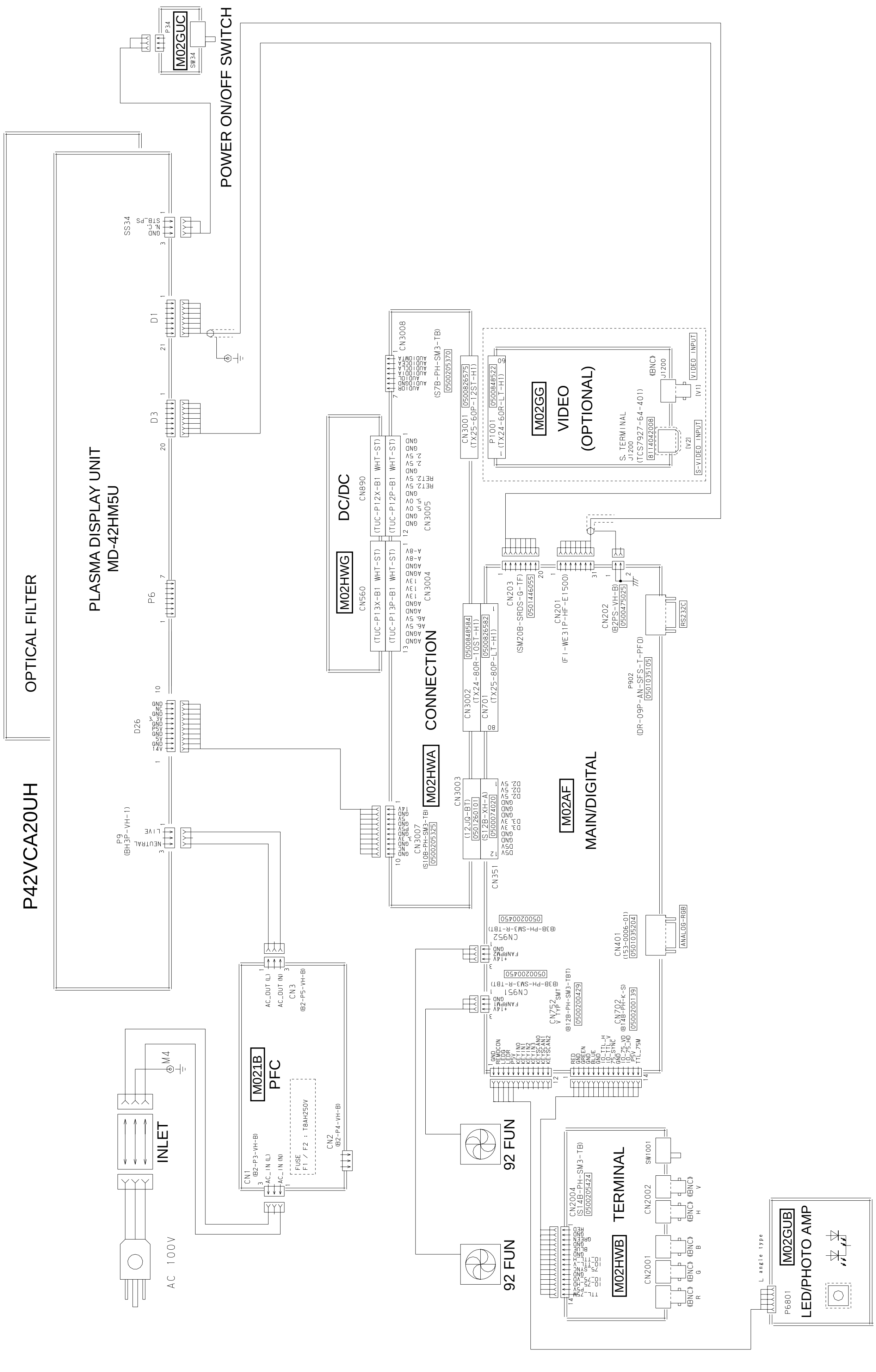


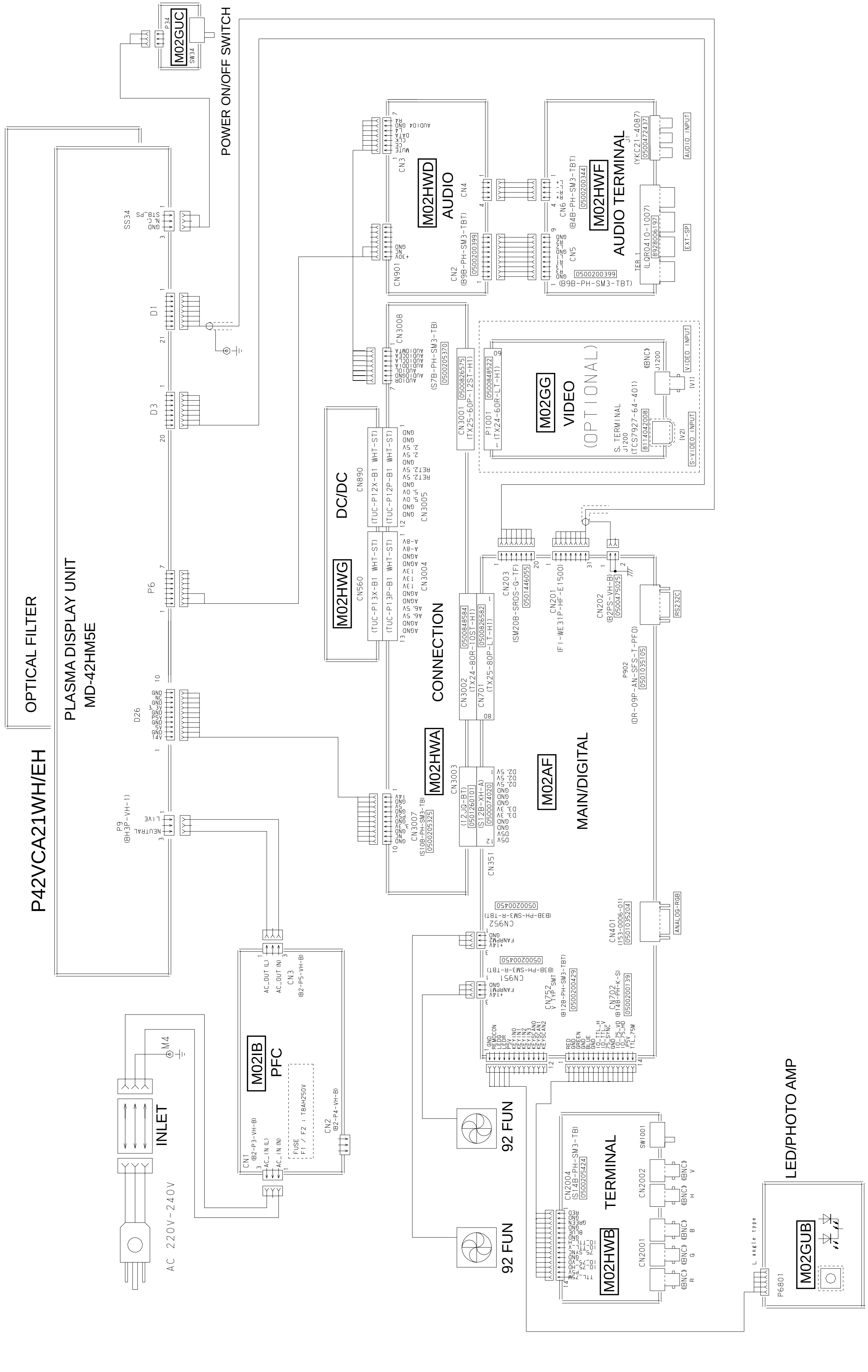
Test Point Location



GENERAL CONNECTION DIAGRAM



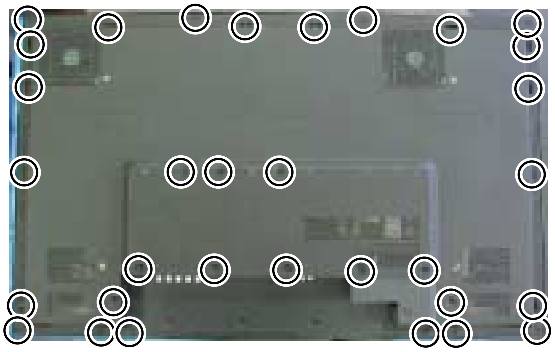

P42VCA20UH
OPTICAL FILTER
PLASMA DISPLAY UNIT
MD-42HM5U
POWER ON/OFF SWITCH
M02GUC
M02HWG
DC/DC
M02HWA
CONNECTION
M02GG
VIDEO
(OPTIONAL)
M02AF
MAIN/DIGITAL
INLET
M021B
PFC
AC 100V
92 FUN
92 FUN
M02HWB
TERMINAL
M02GUB
LED/PHOTO AMP



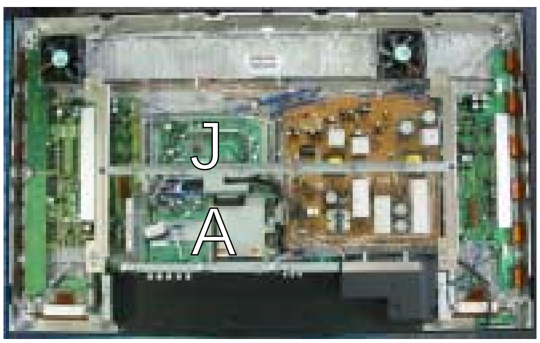
P42VCA21WH/EH
OPTICAL FILTER
PLASMA DISPLAY UNIT
MD-42HM5E
POWER ON/OFF SWITCH
M02GUC
M02HWD
AUDIO
M02HWF
AUDIO TERMINAL
M02GG
VIDEO
(OPTIONAL)
M02HWG
DC/DC
M02HWA
CONNECTION
M02AF
MAIN/DIGITAL
M02IB
PFC
INLET
AC 220V-240V
92 FUN
92 FUN
M02HWB
TERMINAL
LED/PHOTO AMP
M02GUB

DISASSEMBLY

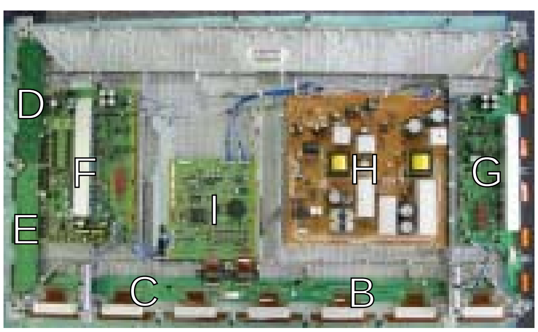
1. Removing the Rear Case and layout of Main PCB (1 of 2)



1. Remove the 32 circled screws and remove the Rear Case.



* Layout of Main PCB.





A: Main Digital PCB



B: Data Drive (Right) PCB



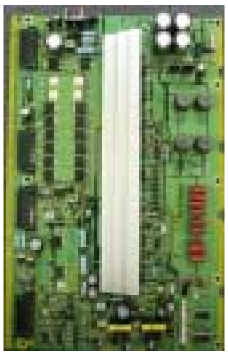
C: Data Drive (Left) PCB



D: Scan Drive Output
(Upper) PCB



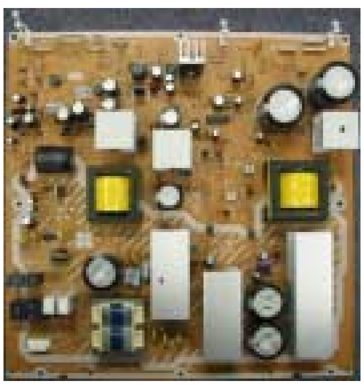
E: Scan Drive Output
(Lower) PCB



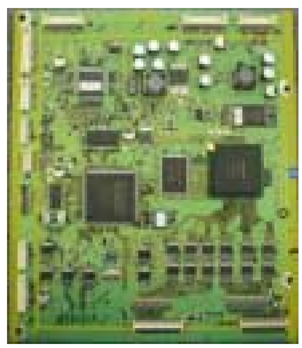
F: Scan Drive PCB



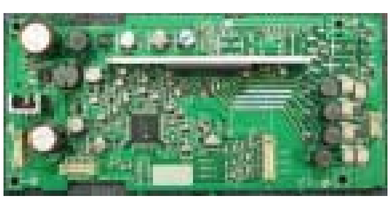
G: Sustain Drive PCB



H: Power Supply PCB

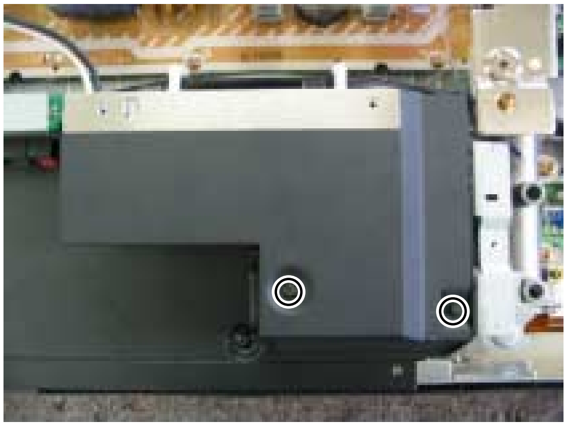


I: Digital PCB

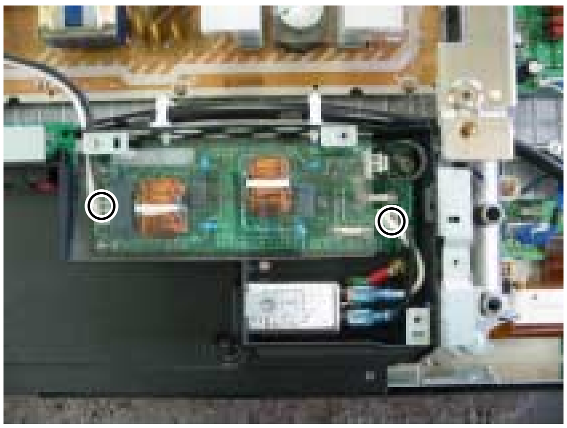


J: Audio Main PCB

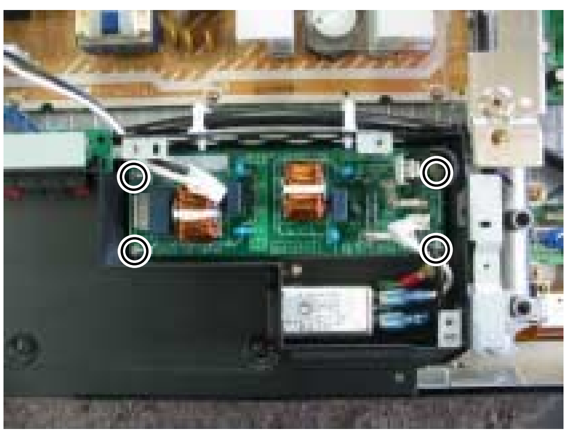
2. Removing the PFC PCB



1. Remove the Rear Case.
2. Remove the 2 screws and PFC cover.



3. Take away the insulator and Disconnect the 2 circled connectors.

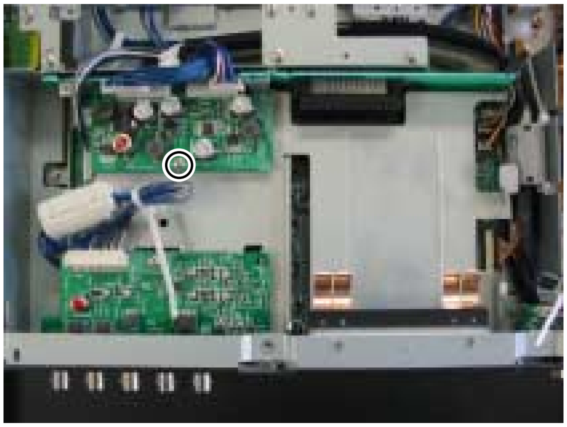


4. Remove the 4 screws and PFC PCB.

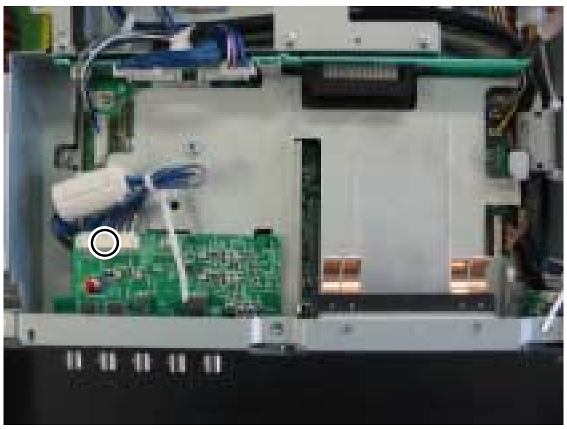


* View after PFC PCB removed.

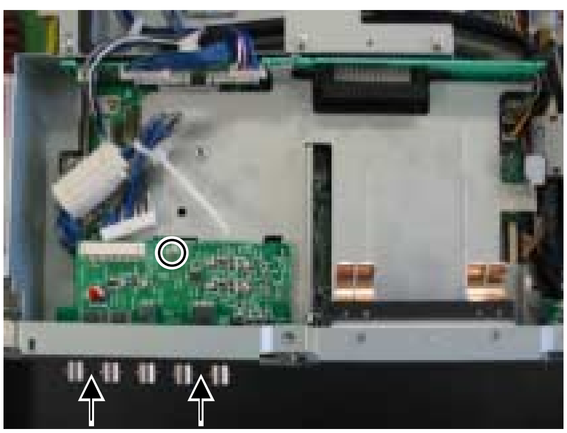
3. Removing the Main Digital PCB (1 of 2)



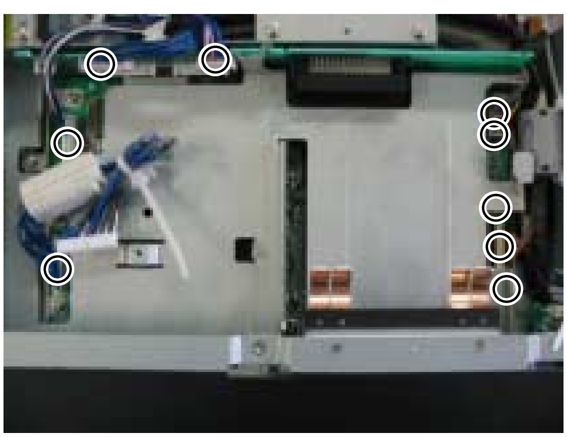
1. Remove the Rear Case.
2. Remove the 1 screw and DC/DC PCB.



3. Disconnect the 1 circled connector.

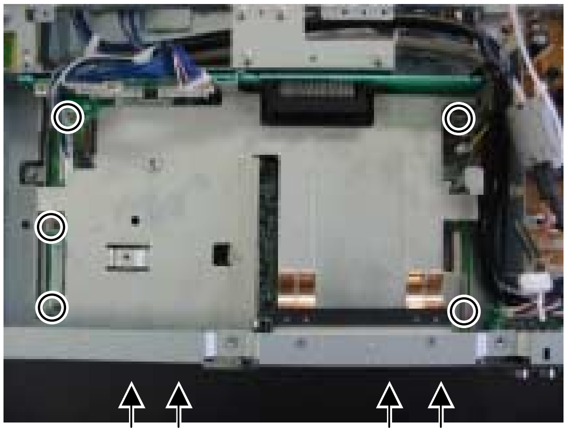


4. Remove the 3 screws and I/O PCB.

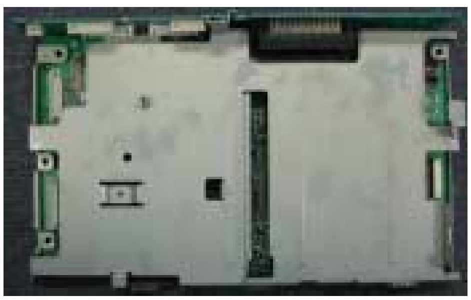


5. Disconnect the 9 circled connectors.

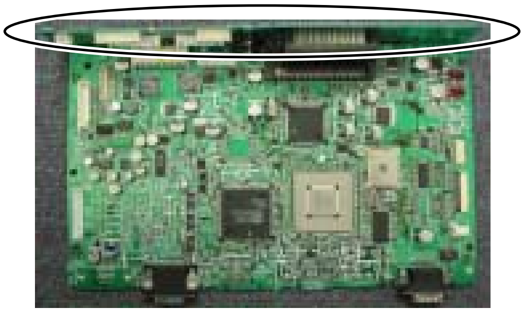
3. Removing the Main Digital PCB (2 of 2)



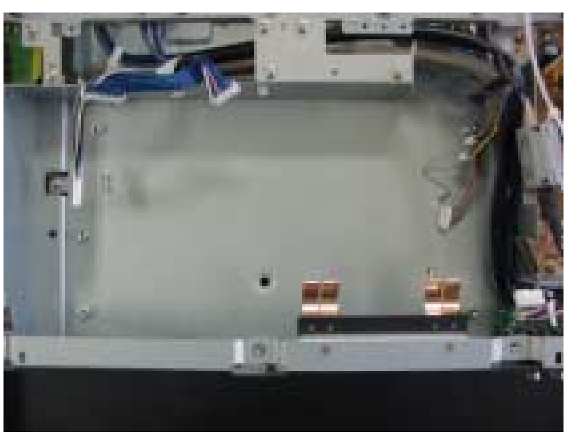
6. Remove the 9 screws and Main Digital Unit.



7. Remove the shield panel.

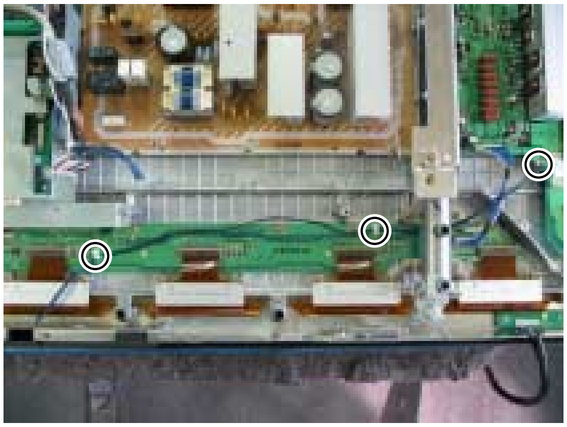


8. Remove the connection PCB.

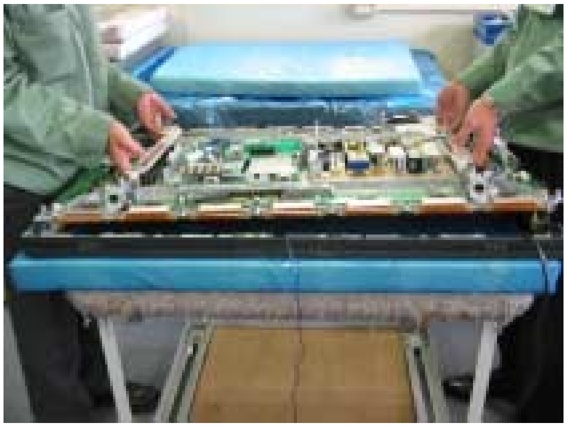


* View after Main Digital PCB removed.

4. Removing the PDP Unit (1 of 3)



1. Perform the procedure 1 ~ 4 in P35.
2. Disconnect the 1 circled connector and the 2 wire clampers.



3. Remove the Base Frame from the Front Case together with the panel and PCBs.

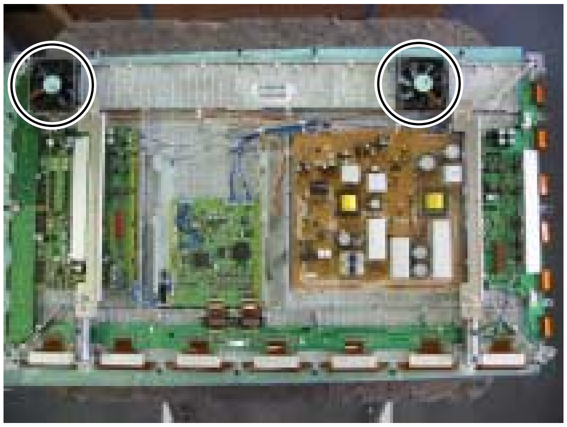


* View after removal of the Base Frame from the Front Case.

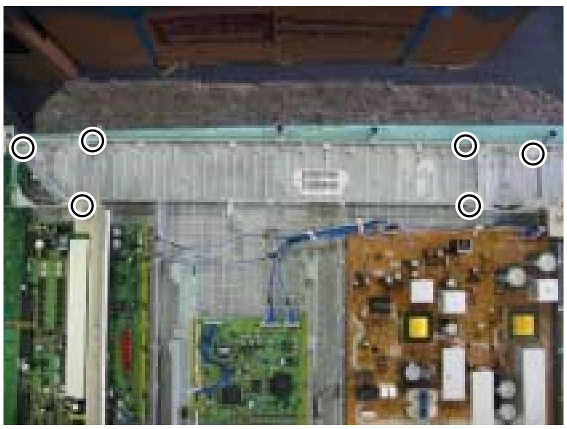


4. Perform the procedure 5 ~ 8 in P35, 36 2 ~ 3 in P44.

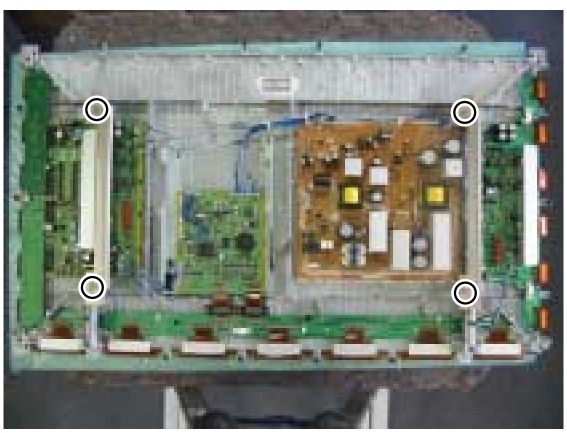
4. Removing the PDP Unit (2 of 3)



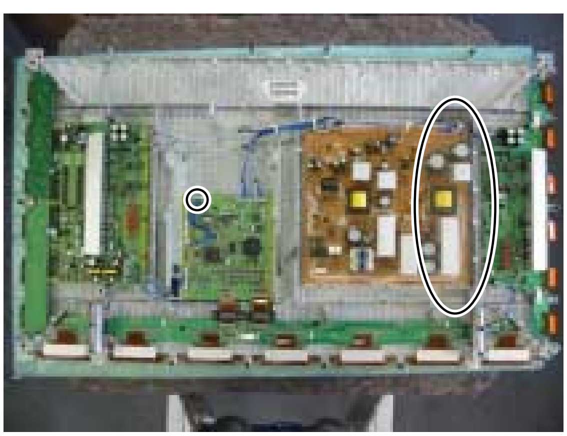
5. Remove the 2 fans.



6. Remove the 6 screws and 2 Fan Plinth.

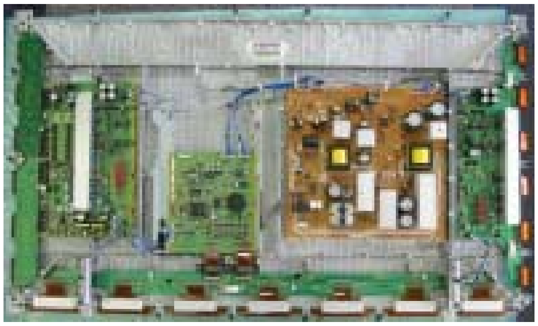


7. Remove the 4 screws and 2 bracket bars.



8. Take away the insulator and Disconnect the 1 circled connector.

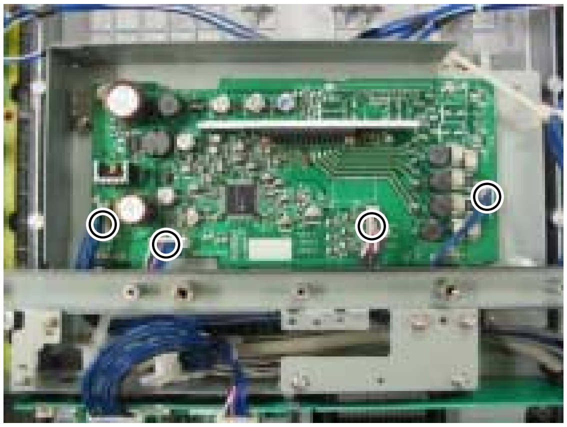
4. Removing the PDP Unit (3 of 3)



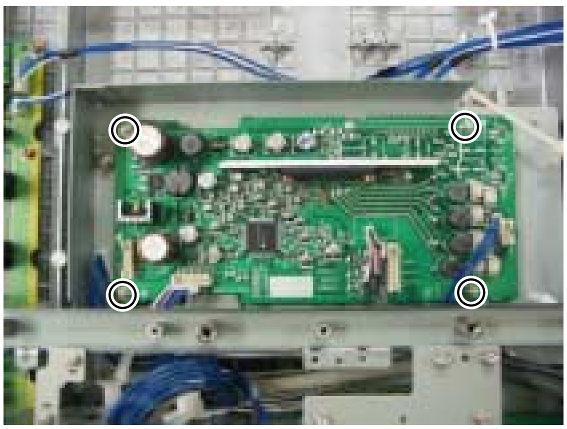
* View after only the PDP Unit removed.

* When the PDP Unit is replaced, make sure to replace the removed parts to their original position.

5. Removing the Audio PCB



1. Remove the Rear Case.
2. Disconnect the 4 circled connectors.

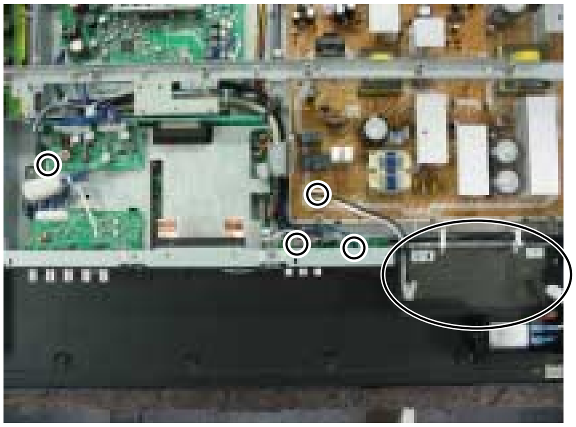


3. Remove the 4 screws and Audio PCB.



* View after Audio PCB removed.

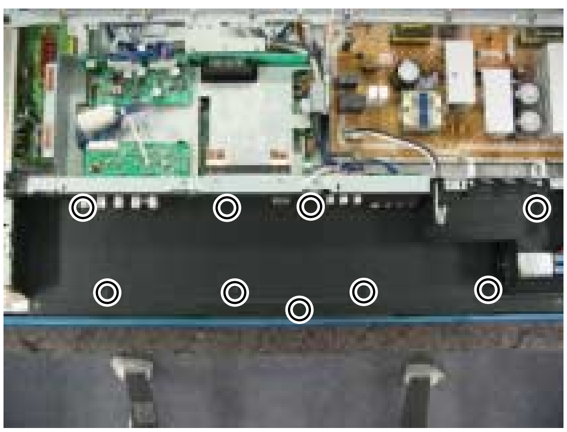
6. Removing the Data Drive (Right) PCB (1 of 3)



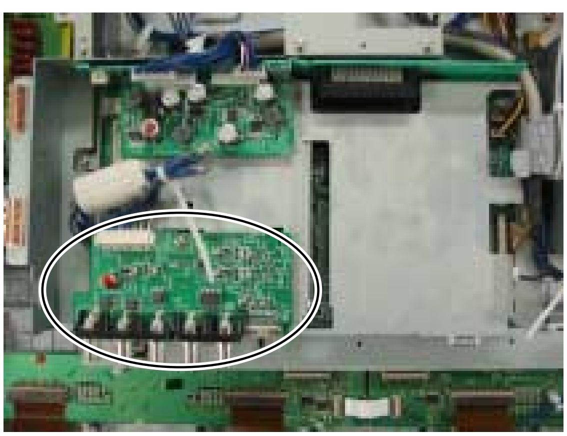
1. Remove the PFC PCB.
   (To remove the PFC PCB, refer to the Page 28)
2. Take away the insulator and Disconnect the 4 circled connectors.



3. Remove the 7 screws.

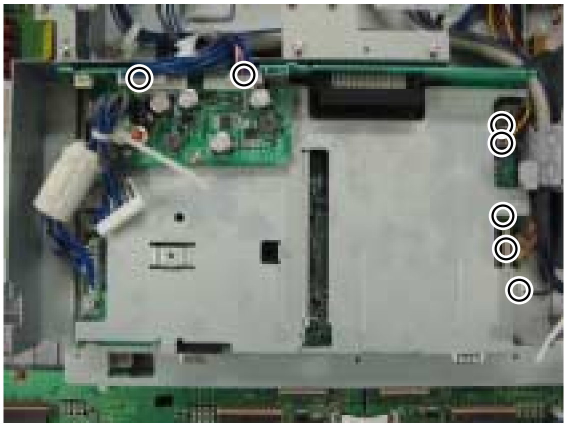


4. Remove the 9 screws and the cover.

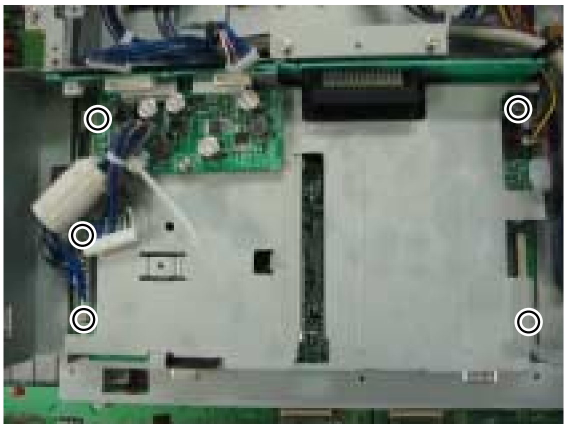


5. Remove the I/O PCB.

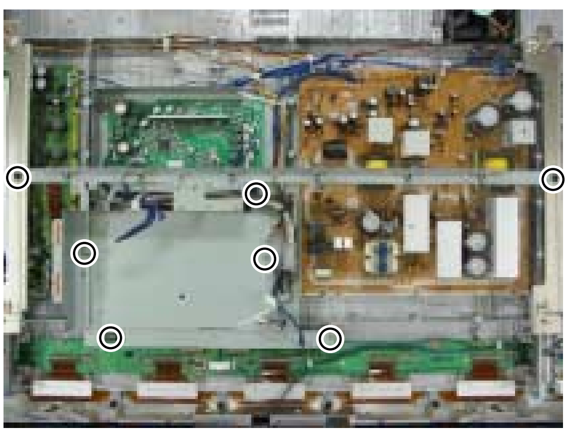
6. Removing the Data Drive (Right) PCB (2 of 3)



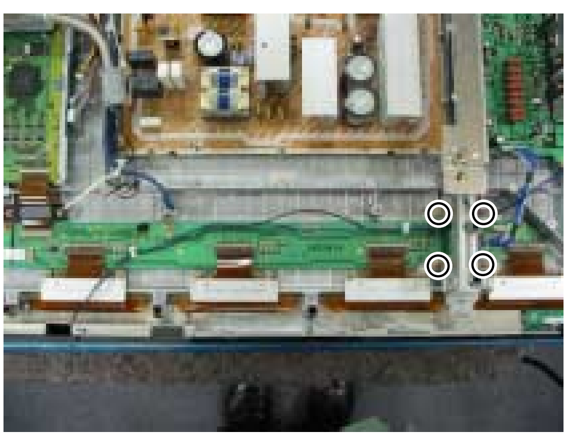
6. Disconnect the 7 circled connectors.



7. Remove the 5 screws and Main Digital PCB together with other PCBs and the cover.

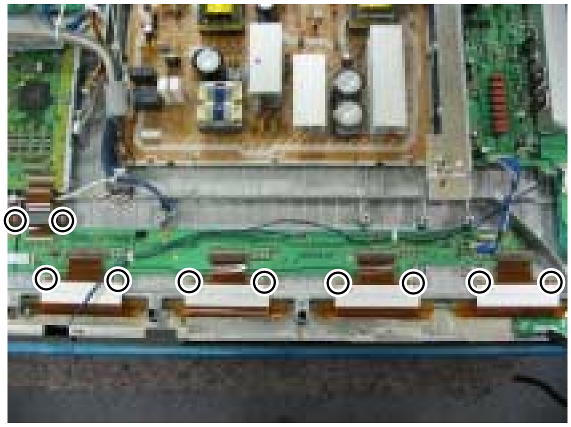


8. Remove the 7 screws, the cover and the center bracket bar.

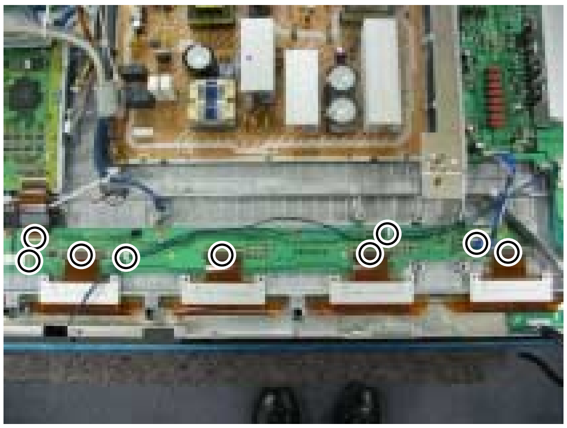


9. Remove the 4 screws and the stand support.

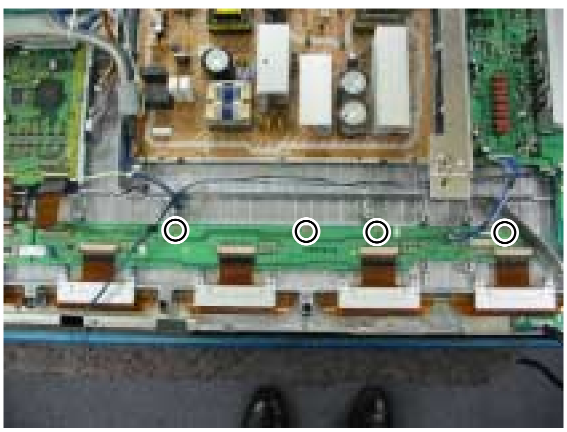
6. Removing the Data Drive (Right) PCB (3 of 3)



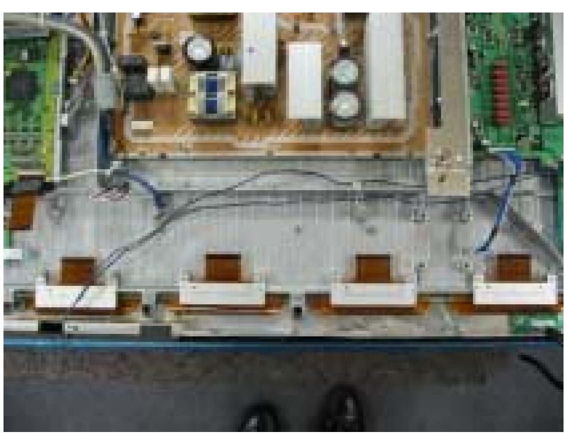
10. Remove the 10 screws.



11. Disconnect the 7 circled connectors and the 2 wire clampers.

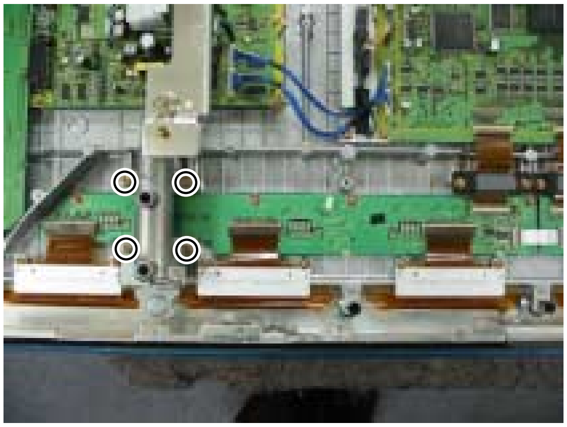


12. Remove the 4 screws and Data Drive (Right) PCB.

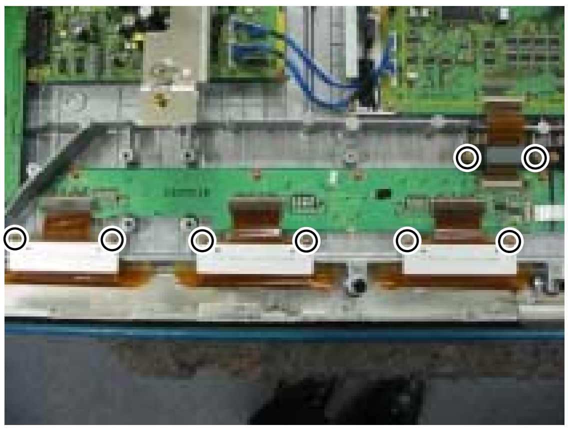


* View after Data Drive (Right) PCB removed.

7. Removing the Data Drive (Left) PCB (1 of 2)



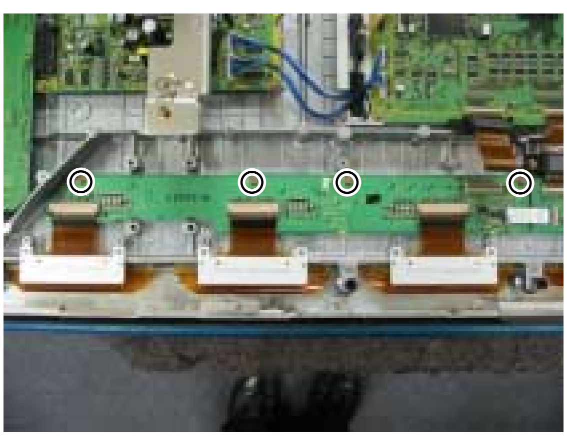
1. Perform the procedure 1 ~ 8 in P35 ~ 36.
2. Remove the 4 screws and the stand support.



3. Remove the 8 screws.



4. Disconnect the 5 circled connectors.



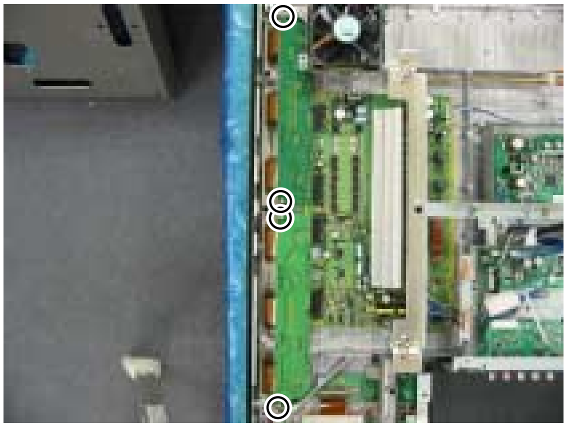
5. Remove the 4 screws and Data Drive (Left) PCB.

7. Removing the Data Drive (Left) PCB (2 of 2)

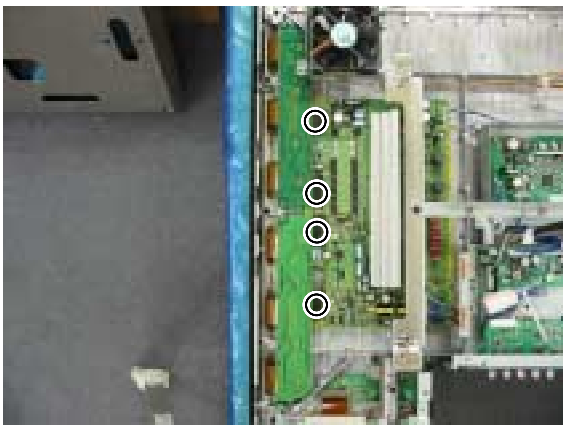


* View after Data Drive (Left) PCB removed.

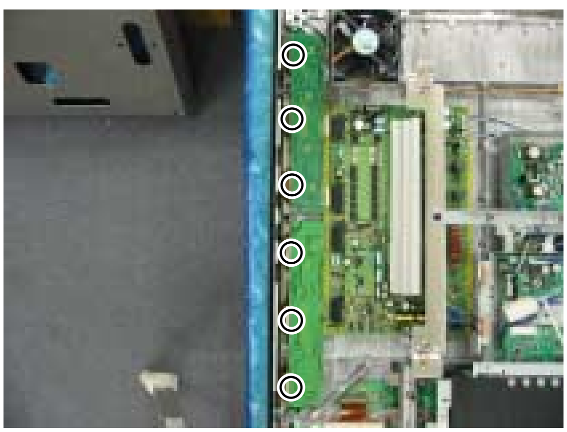
8. Removing the Scan Drive Output (Upper / Lower) PCB



1. Remove the Rear Case.
2. Remove the 4 screws.



3. Disconnect the 4 circled connectors.

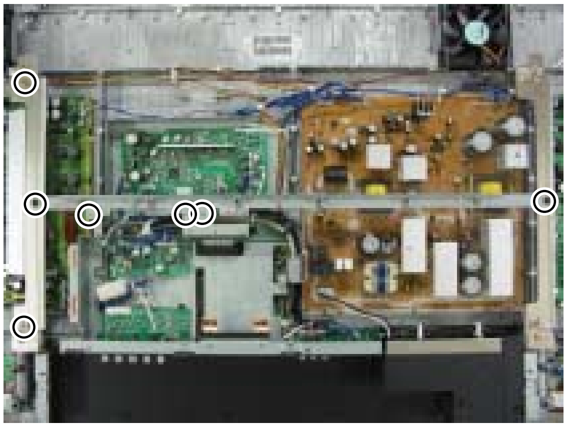


4. Disconnect the 6 circled connectors.

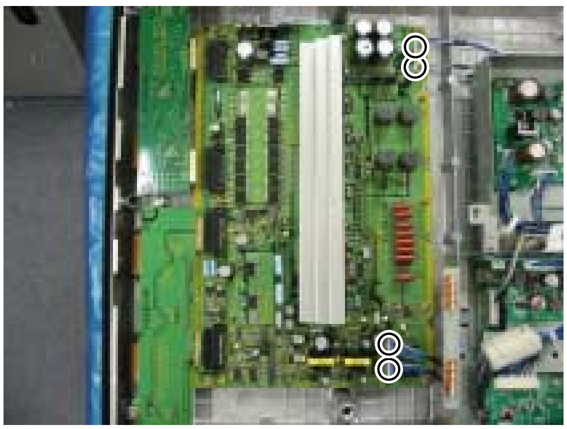


* View after Scan Drive Output
  (Upper / Lower) PCB removed.

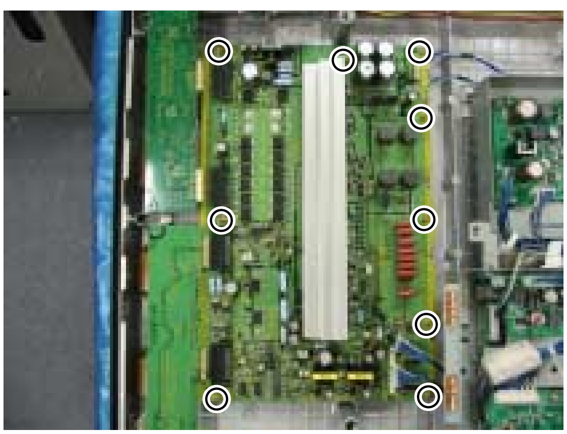
9. Removing the Scan Drive PCB



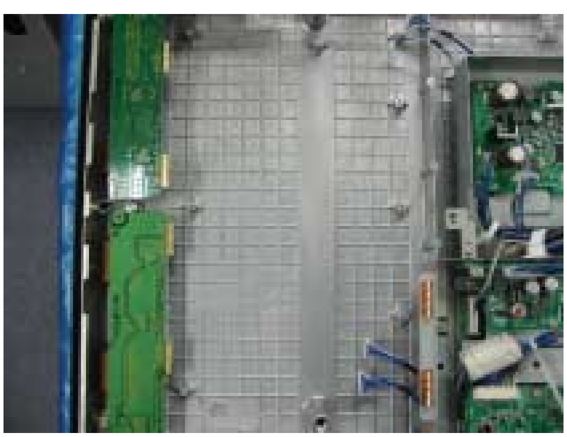
1. Perform the procedure 1 ~ 3 in P40.
2. Remove the 7 screws and 2 bracket bars.



3. Disconnect the 4 circled connectors.

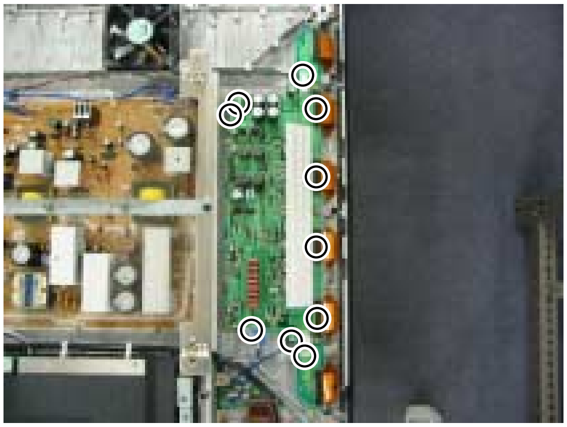


4. Remove the 9 screws and Scan Drive PCB.

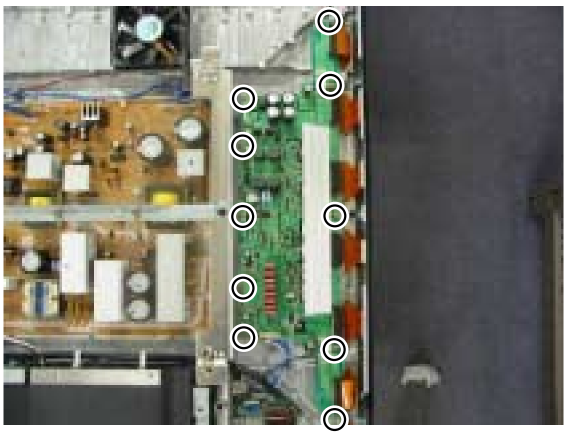


* View after Scan Drive PCB removed.

10. Removing the Sustain Drive PCB



1. Remove the Rear Case.
2. Disconnect the 10 circled connectors.

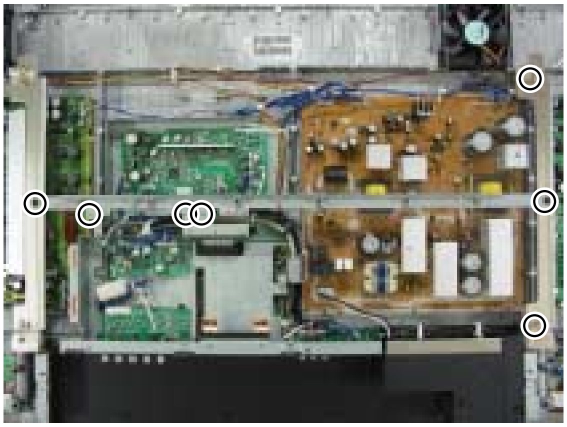


3. Remove the 10 screws and Sustain Drive PCB.

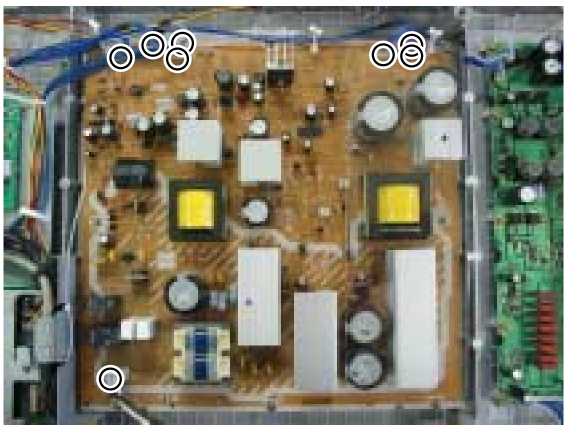


* View after Sustain Drive PCB removed.

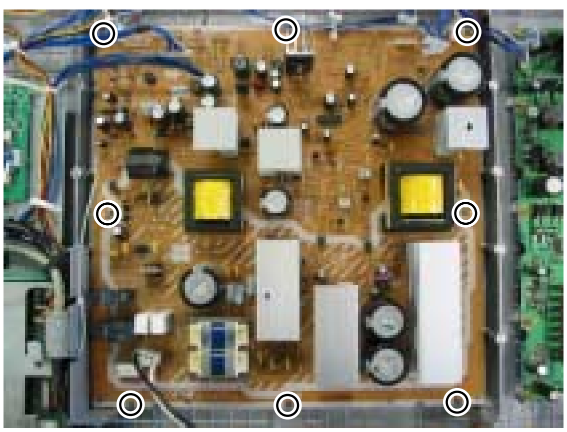
11. Removing the Power Supply PCB



1. Remove the Rear Case.
2. Remove the 7 screws and 2 bracket bars.



3. Take away the insulator and Disconnect the 8 circled connectors.

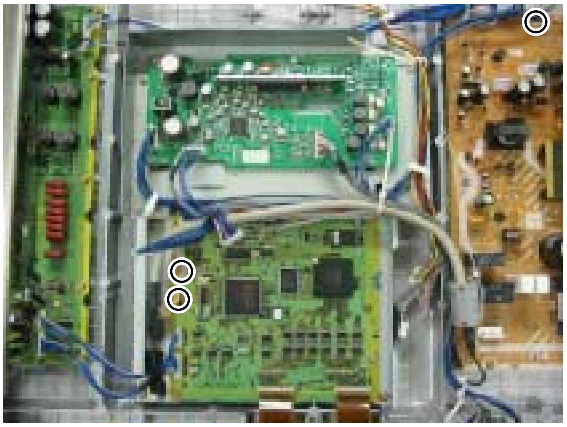


4. Remove the 8 screws and Power Supply PCB.

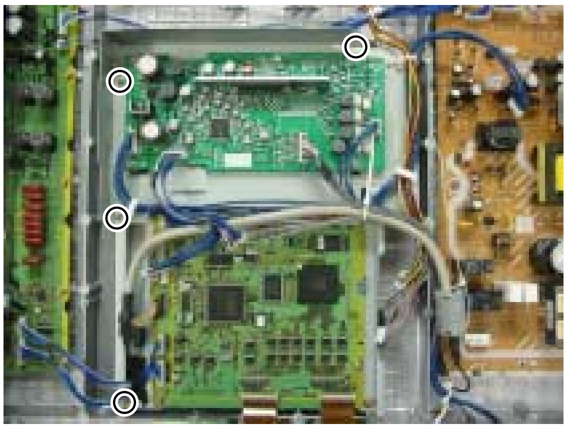


* View after Power Supply PCB removed.

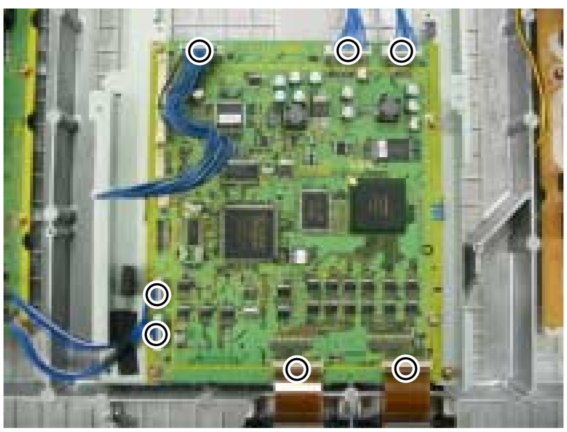
12. Removing the Digital PCB (1 of 2)



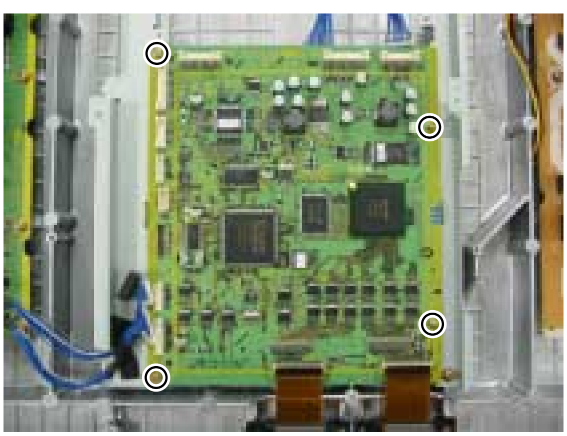
1. Perform the procedure 1 ~ 8 in P35 ~ 36.
2. Disconnect the 3 circled connectors.



3. Remove the 4 screws, the cover, Audio PCB and the wires together.



4. Disconnect the 7 circled connectors.



5. Remove the 4 screws and Digital PCB.

12. Removing the Digital PCB (2 of 2)



* View after Digital PCB removed.

13. Removing the Bezel Front



1. Remove the 2 circled Cover Stands and remove the screws in the holes.



2. Lift the bottom of the Bezel Front.



3. Lift the Bezel Front upward to remove it.
   (The top of the Bezel Front is hooked.)



* View after Bezel Front was removed.

14. Removing the Optical Filter



1. Remove the Bezel Front.
   (To remove the Bezel Front, refer to the Page 46)

2. Remove the 14 screws on the Filter Holders at each side.



3. Remove the Filter Holders by sliding them in the arrow directions.



4. Remove the Optical Filter.

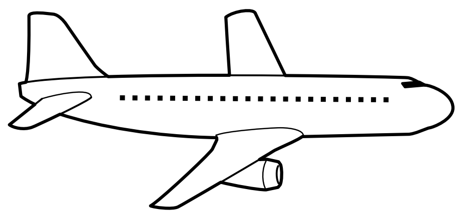
PARTS LIST

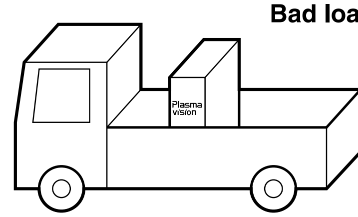
Ref.no.	Description	P42VCA20WH	P42VCA20EH	P42VCA20UH	P42VCA21WH	P42VCA21EH
Cabinet	Bezel Front	8112000000	⇦	⇦	⇦	⇦
	Case Rear	8116117001	⇦	⇦	⇦	⇦
	Cover Stand	8108298008	⇦	⇦	⇦	⇦
	Holder Filter L/R	8110619006	⇦	⇦	⇦	⇦
	Holder Filter T/B	8110614001	⇦	⇦	⇦	⇦
Electric	Fan Motor	8900298008	⇦	⇦	⇦	⇦
	Optical Filter	8112396004	⇦	⇦	⇦	⇦
	PFC PCB	8116351009	⇦	⇦	⇦	⇦
	Connection PCB	8116031000	⇦	⇦	⇦	⇦
	DC/DC PCB	8115971000	⇦	⇦	⇦	⇦
	I/O PCB	8115964002	⇦	⇦	⇦	⇦
	LED/PHOTO PCB	8116354000	⇦	⇦	⇦	⇦
	Main Digital PCB	8116342007	8116343004	8116344001	8116326007	8116324003
	Audio Main PCB	-----------	-----------	-----------	8115973004	⇦
	Audio Connection PCB	-----------	-----------	-----------	8116171003	⇦
	PDP Unit	S141011975	⇦	S141011968	S141011975	⇦
	Power Cord VDE	8112527002	⇦	-----------	8112527002	⇦
	UL.CSA	-----------	-----------	8112528009	-----------	-----------
	Remote Control Unit	8108442005	⇦	⇦	⇦	⇦
	Panel Glass	S141011944	⇦	⇦	⇦	⇦
	Data Drive Right PCB (C1)	S141011838	⇦	⇦	⇦	⇦
	Data Drive Left PCB (C2)	S141011845	⇦	⇦	⇦	⇦
	Scan Drive Output (Upper) PCB (SU)	S141011852	⇦	⇦	⇦	⇦
	Scan Drive Output (Lower) PCB (SD)	S141011869	⇦	⇦	⇦	⇦
	Scan Drive PCB (SC)	S141011920	⇦	⇦	⇦	⇦
	Sustain Drive PCB (SS)	S141011937	⇦	⇦	⇦	⇦
	Power Supply PCB (P1)	S141011913	⇦	S141011906	S141011913	⇦
	Digital PCB (D)	S141011890	⇦	⇦	⇦	⇦
Packing	Carton Top	8115319000	⇦	⇦	⇦	⇦
	Carton Bottom	8114547008	⇦	⇦	⇦	⇦
	Packing Joint-D	8108655009	⇦	⇦	⇦	⇦
	Packing Pad-Top	8114551005	⇦	⇦	⇦	⇦
	Packing Pad-Bottom	8114550008	⇦	⇦	⇦	⇦
	Carton Accessory	8111799004	⇦	⇦	⇦	⇦
	Insheet	8111634008	⇦	⇦	⇦	⇦

⇦ : Same as left

TRANSPORTATION AND HANDLING RESTRICTIONS

Transportation

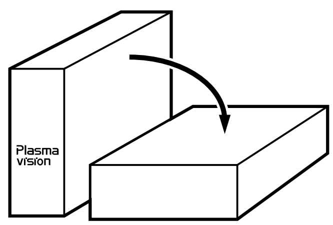




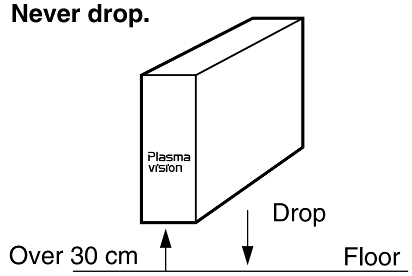
Don't load the plasmavision on a truck as shown in the drawing.

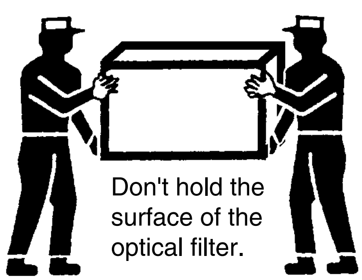
Handling

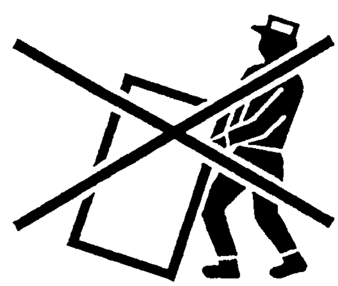
Never topple.



Never drop.



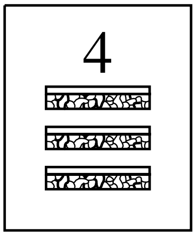




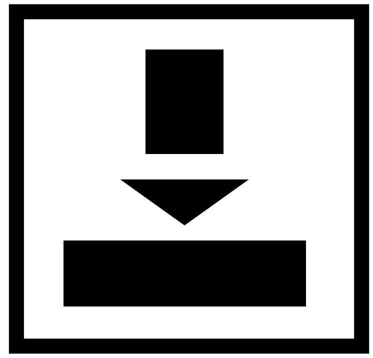






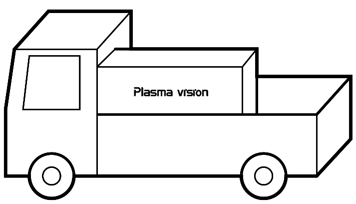


Don't stack the plasmavision over three units high.

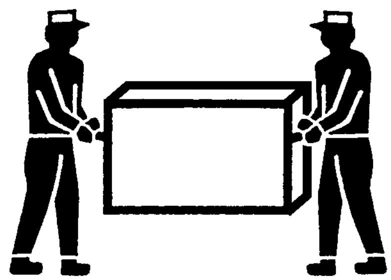


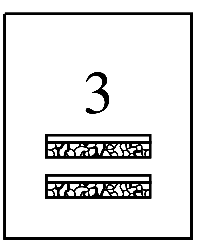
Example of good transportation and handling

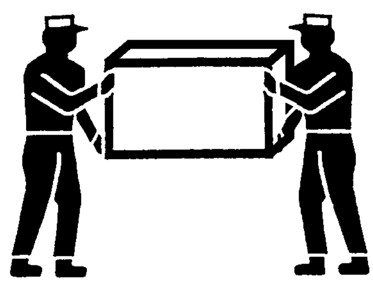
Good loading



Load the plasmavision as shown above.







FUJITSU GENERAL CUSTOMER SERVICE LIMITED
GLOBAL SUPPORT DIVISION
FEBRUARY 2003